TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, [redacted] 1921

No. [redacted]97

MacARTHUR BROTHERS COMPANY, APPELLANT,

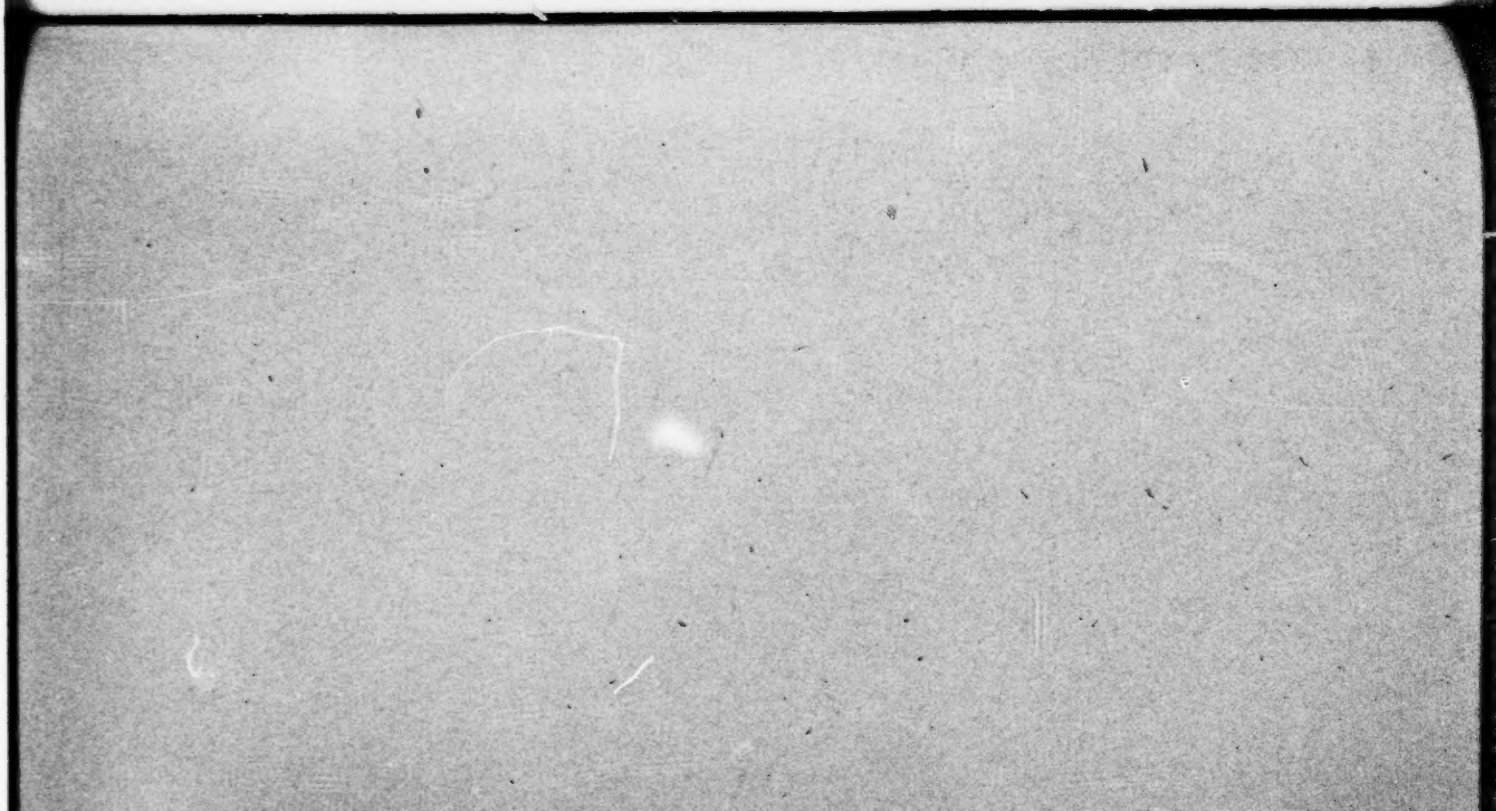
vs.

THE UNITED STATES.

APPEAL FROM THE COURT OF CLAIMS.

FILED JUNE 29, 1920.

(27,787)



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OCTOBER TERM, 1920.

No. 430.

MacARTHUR BROTHERS COMPANY, APPELLANT,

vs.

THE UNITED STATES.

APPEAL FROM THE COURT OF CLAIMS.

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JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., FEBRUARY 1, 1921.

a Court of Claims.

No. 33972.

MacArthur Brothers Company

v.

The United States.

I. *Note Relative to Filing of Petitions.*

The original petition in this case was filed June 21, 1918. Subsequently, to wit, on October 30, 1918, the claimant, by leave of court, filed an amended petition. Subsequently, to wit, June 19, 1919, the claimant, by leave of the court, filed a second amended petition.

1 In the Court of Claims.

No. 33972.

MacArthur Brothers Company

vs.

The United States.

II. *Amended Petition.*

Original Petition Filed June 21, 1918; Amended Petition Filed October 30, 1918.

To the Honorable the Court of Claims:

The claimant, MacArthur Brothers Company, respectfully represents:

The claimant is a corporation organized and existing under the laws of the State of New Jersey.

The claimant on the 23d day of September, 1910, entered into a contract with the United States, duly represented by Colonel C. McD. Townsend, Corps of Engineers, United States Army, for constructing the west end of the new canal at Sault Sainte Marie, Michigan, which contract was duly approved by the Chief of Engineers, U. S. A., a copy of which contract, together with the advertisement and specifications on which the same was based and which form a part thereof, is annexed to this petition and marked Exhibit "A" and made a part hereof.

The work to be done comprised the excavation of a portion of the new navigation channel, the construction of canal walls
2 and piers, preparing a new headrace and forebay with controlling works, ice passages and weir, and the removal of existing, and construction of new, dykes.

The specifications covering the construction of the navigation channel provided that a portion of same should be taken out in the wet by dredges, and the remainder excavated in the dry. For the purpose of permitting this work to be done in the dry, it was necessary to construct certain cofferdams, one of which, known as the West Cofferdam, was to be built as a contract item, and connected the rock spoil bank (extending along the north side of the work) with the North West Pier.

Said North West Pier had been constructed by another contractor for the United States shortly prior to the date of the claimant entering into the contract upon which this suit is founded.

The specifications which formed a part of said prior contract of the said preceding contractor were dated February 4, 1908, and were published and accessible to all persons desirous of examining the same; and the bids were advertised to be opened March 5, 1908. The contract for the performance of said work was dated March 23, 1908.

The work provided for by said specifications and contract of 1908 consisted among other things in excavating and removing material from an area of about 3,700 feet long; and in building, placing and filling 1,400 linear feet of timber crib walls and in building 3,700 feet of concrete walls.

The construction of said timber crib walls was provided for by the following provisions of the specifications forming a part of the said contracts of 1908 as follows, to wit:

3 "Timber Revetment Walls.

33. Character of Work.—This part of the work comprises the building, placing and filling of timber revetment walls, substructure and superstructure, the cribs for substructure being in lengths of 69, 100 and 116 feet. These walls are located in that part of the work done in the wet. All cribs except the end crib are of a uniform width of 16 feet.

The timber and iron forming a part of the permanent work of the walls will be furnished by the United States and stored on or immediately adjacent to canal lands; the iron in a Government warehouse, and the timber sorted in piles as to lengths.

34. Preparation of Foundation.—Where sound rock is found at an elevation above 91 canal datum, all earth, loose and unsound rock, and other material, shall be removed from the proposed wall site and for one foot back of the same, so that the foundation shall be sound rock as nearly a plane surface as the character of the rock will permit, all to the satisfaction of the Engineer. For this excavation within the limits specified payment will be made for material actu-

ally excavated according to the class planes within which it may lie.

For the cribs to be placed in the area within the present canal and for cribs to be built where suitable rock foundation is not found above elevation 91 canal datum, the foundation shall be prepared as follows: The inequalities in the rock surface shall be filled with coarse gravel and cobble stone, or other equally suitable material, approved by the Engineer, the crib founded upon the foundation bed so prepared and then leveled up before adding the superstructure. For gravel filling so required the contractor will be paid at the contract rate for crib filling.

35. Framing.—The forms of cribs, manner of framing and bolting the position of ties and tie rods, and all other details, shall be as shown in the contract drawings, and such others in minor modification of the same as may be furnished the contractor from
4 time to time.

The workmanship of framing shall be first-class. The diameter of holes for drift holes shall be one-eighth inch less than diameter of bolts, and the holes shall be bored the entire distance bolts are to be driven.

After the preparation of the rock foundation, as specified above, accurate soundings shall be taken and the bottom of the cribs shall be framed to approximately fit the bottom, without scribing, and the cribs leveled up according to the method indicated in the contract drawings.

After the cribs are sunk and filled as hereinafter specified, the top course of each shall be leveled so as to be in the required horizontal plane, after which a continuous superstructure shall be built over the entire length and the filling extended to the top. The fender pieces shall then be bolted in place.

36. Placing and Filling Cribs.—In placing cribs, each one shall be held in its required position, and, when filled with stone, no point in its face shall be more than three inches out of alignment, and the space between adjacent cribs shall not exceed 6 inches. Such temporary floors, platforms and partitions as may be needed for use in sinking the cribs shall be furnished and placed by the contractor, but these shall be so arranged as to permit free access to the face of the crib when in place. After the crib is sunk in its proper position, any vacancies between the crib face timbers and the underlying rock exceeding six inches in height or four feet in length, shall be filled with granolithic or concrete in cloth bags, placed by diver as directed by the Engineer. The amount of this work required will depend upon the care exercised in stripping the rock surface and in framing and placing the cribs, and for concrete so placed payment will be made at the contract rate for concrete, all other expense being considered a part of the cost of framing. The rock filling shall consist of hard broken sandstone taken from the excavation made in the dry, and must be so deposited in the cribs and superstructure as not to injure any part of the work; the largest pieces must not exceed three feet on a side, and only so much of small spawls shall
5 be used as is required to fill the voids between larger stone."

The claimant by its proper officers and engineers examined the specifications containing these provisions and the drawings therein referred to between the time the same were published and the time bids were received thereon; and was one of the bidders for the work, which work, however, was awarded to another contractor, by contract dated, as hereinbefore stated, March 23, 1908.

Subsequently thereto on the 30th day of July, 1910, the specifications were advertised by the United States upon which the claimant became the contractor by said contract dated September 23, 1910, hereinbefore referred to.

At the time of bidding upon the specifications of July 30, 1910, as well as at the time of entering into the said contract, September 23, 1910, the claimant assumed and believed, as it had a right to do, that the specifications of February 4, 1908, and March 23, 1908, had been duly and properly carried out by the contractor who had entered into the contract for the work. If they had been so carried out the claimant would have been able to perform under his own contract in the dry such portions of the work as were required by the contract to be done in the dry.

It was the expectation of the claimant that by constructing the west cofferdam and sheathing the face of the North West Pier he would then be able with a reasonable amount of pumping machinery to pump out the enclosure and remove the Class "B" excavation in the dry.

The west cofferdam was begun on the 24th of September, 1910, and completed on the 24th of December, 1910. In the meantime
6 material was being secured for making the North West Pier tight, and between October 21st and November 1st a quantity of sand was dumped in the angle, near the outer end. On October 28th the work of covering the face of the pier with 2-inch sheathing was started. This work was carried on by the aid of divers, up to and including December 16th, when the pier had been covered up to a point opposite the junction of the west cofferdam.

The claimant, however, began to encounter crevices under the foundation of the cribbing, and it was only then discovered that the specifications of the previous contract had not been carried out; that loose and unsound rock had not been taken from the proposed wall site; that the foundation was not composed of sound rock, or leveled off to as nearly a plane surface as the character of the rock would permit; that the inequalities in the rock were not properly filled with suitable material; that the vacancies between the crib-face timbers and the underlying rock exceeding 6 inches in height or 4 feet in length were not filled with granolithic or concrete in cloth bags; and that generally the cribs had not been constructed and connected in accordance with the specifications of said contract of March 23, 1908.

These facts could not by the exercise of any reasonable diligence on the part of the claimant have been discovered prior to its entering into the contract or prior to the time when they were so discovered after the claimant had begun the work under its contract.

The claimant having completed the work of sheathing the face of

the crib, and the diver having placed sand bags along the toe of the sheathing, and a 15-inch and 20-inch centrifugal pump having been installed, an attempt was made, starting December 25, 1910, to
7 pump out the area enclosed by the cofferdam. After a continuous run of 25 hours and 25 minutes, the pumps were unable appreciably to lower the level of the water therein. starting December 28, a further attempt to pump out was made, with the intention of running three days and three nights. This attempt likewise demonstrated that the leakage was so great that the pumps were unable to lower the water.

Extraordinary and expensive means therefore had to be resorted to for a continuance of the work. Five (5) additional pumps were installed, and two stock-ramming machines were also installed in order to shut out the water.

A large amount of concrete had to be placed in the large leaks found in and around the cribs. A large number of employees had to be placed upon the work at great expense, and the time of doing the work was greatly delayed beyond what claimant would have had to take if the conditions had been as shown by the specifications of the previous contract and had the work been performed by the previous contractor according to said specifications.

These methods were continued throughout the entire season of 1912 and until July 3, 1913, the work being performed under the utmost difficulties and at greatly enhanced expense.

By paragraphs 22 to 26 of the specifications of the claimant's contract certain areas were to be excavated in the dry while certain other portions of the work were to be dredged or otherwise taken out by methods applicable to wet excavation.

By Par. 53 of said specifications separate unit prices were called for under different classifications, as for dry work under Class B and Class C, and dredging or work in the wet under Class A and Class D.

By the proposal made by the claimant and accepted by the
8 United States, and which forms a portion of the contract and as such is hereunto annexed as an exhibit to this petition, the bids for the classes constituting dry work are at lower unit prices than those for dredging or wet work.

The description of the work, Class B, as dry work in the specifications was, by reason of the conditions existing at the site of the work as hereinbefore stated, a misrepresentation of the character of the work to be done, and induced on the part of the claimant, a lower bid than would have been made if the conditions had been properly described in the specifications. Owing to the leakage coming through the Northwest Pier, it was not practicable for Class B excavation to be made in the dry as by said specifications it was represented that it could be.

The methods adopted by the claimant were different methods from those of excavation in the dry as contemplated and required by paragraphs 22 to 26 of the specifications of the contract of the claimant as hereto attached, and were much more expensive. Said additional expense was incurred by reason of the work having been done by the previous contractor in a different manner from what was pro-

vided in the specifications, and also because, contrary to the specifications of the claimant's own contract, said work was not capable of being done in the dry.

By reason of the differences as found by this claimant from the conditions as they would have been if the work had been carried out as was required by the specifications of the previous contract of 1908, and by reason of the conditions being different from what was represented in the specifications of the claimant's contract, in that the excavation required to be done in the dry was not capable of being so done, the claimant incurred a greatly increased expense in carrying out the work under his contract. The work was finally com-
9 pleted and accepted by the United States November 13, 1914.

By reason of the conditions encountered being different from what they were represented by the specifications of the contract of 1908, of which specifications the claimant had knowledge at the time of entering into this contract, as well as by reason of the conditions being different from what was represented by the specifications of claimant's contract, in that the excavation required by this contract to be done in the dry was not capable of being so done without extraordinary and unusual expenditures not contemplated by either of the contracting parties and by reason thereof the claimant sustained the following damages:

1. The excavation of 274,520 cubic yards of material cost 91 cents a cubic yard more than it would have cost if the conditions had been as represented to, and accepted by, the claimant, making an increased expense of	$249,813.20
2. Amount of pumping done by the claimant over and above the estimated cost of pumping and over and above what the pumping would have cost under the normal conditions which the claimant had the right to expect	79,262.79
3. Stopping leaks in cribs which would not have been there if the cribs had been constructed in accordance with the specifications of the contract of 1908	9,246.09
4. Stock-ramming, amount chargeable to work on the North West Pier on account of the same being constructed in a manner different from and contrary to the specifications	27,730.59
Total	$366,052.67

10 No assignment or transfer of this claim, or of any part thereof or interest therein, has been made; and the claimant is justly entitled to the amount herein claimed from the United States, after allowing all just credits and offsets.

The claimant is a corporation as hereinbefore stated and has at all

times borne true faith and allegiance to the Government of the United States and has never in any way aided, abetted, or given encouragement to rebellion against the said Government. And the claimant prays judgment for three hundred and sixty-six thousand and fifty-two dollars and sixty-seven cents ($366,052.67).

KING & KING,
Attorneys of Record.

Washington, D. C.

STATE OF NEW YORK,
County of New York, ss:

John R. MacArthur, being duly sworn, deposes and says: I am Vice-President of MacArthur Brothers Company, the claimant in this case. I have read the above amended petition, and the matters therein stated are true to the best of my knowledge and belief.

JOHN R. MACARTHUR.

Subscribed and sworn to before me this 23rd day of October, 1918.
[SEAL.]

C. W. FERRY,
Commissioner of Deeds, City of New York.

11 EXHIBIT A.

Improving St. Mary's River at the Falls, Michigan.

War Department.

Advertisement.

U. S. Engineer Office,

Jones Building.

Detroit, Michigan, July 30, 1910.

Sealed proposals for Canal Construction, etc., at Sault Ste. Marie, Mich., will be received at this office until 3 p. m., August 30, 1910, and then publicly opened. Information on application.

C. McD. TOWNSEND,
Col. Eng'rs.

General Specifications.

1. Guaranty.—No proposals will be considered unless accompanied by a guaranty, which should be in manner and form as directed. At the option of bidders certified checks for the amount of the guaranty required may be furnished in place of the guaranty.

2. Bids in Triplicate.—All bids and guaranties must be made in triplicate upon printed forms to be obtained at this office.

3. Guarantors.—Each individual guarantor will justify in the sum of at least one-tenth of the amount of the bid. The liability of the guarantors and bidder is determined by the act of March 3
12 1883, 22 Statutes, 487, Chap. 120, and is expressed in the guaranty attached to the bid.

4. Contract and Bond.—The bidder to whom award is made will be required to enter into written contract with the United States, with good and approved security, in an amount of one hundred fifty thousand dollars ($150,000) within ten (10) days after being notified of the acceptance of his proposal. The contract which the bidder and guarantors promise to enter into shall be, in its general provisions, in the form adopted and in general use by the Engineer Department of the Army, blank forms of which may be inspected at this office and will be furnished, if requested, to parties proposing to submit bids. Parties making bids are to be understood as accepting the terms and conditions contained in such form of contract. The right is reserved to reject any or all bids, and to waive any informalities in the bids received.

5. Direction.—The proposals and guaranties must be placed in a sealed envelope marked "Proposals for Canal Construction, etc., to be opened 3 p. m., August 30, 1910," and inclosed in another sealed envelope addressed to U. S. Engineer Office, Jones Bldg., Detroit, Mich., but otherwise unmarked. It is suggested that the inner envelope be sealed with sealing wax.

6. Contracting Officer.—Whenever the term "Contracting Officer" is used in the specification it is understood to refer to the officer of the Corps of Engineers, U. S. Army, in charge of the work. He will be represented on the work by as many assistants as may be necessary. Whenever the term "contractor" is used it is understood to refer to the second party to the contract. Subcontractors, as such, will not be recognized.

7. Quantities Approximate.—It is understood and agreed that the quantities given in these specifications are approximate only, and that no claim shall be made against the United States on account of any excess or deficiency, absolute or relative, in the same. No allowance will be made for the failure of a bidder or of the contractor to estimate correctly the difficulties attending the execution of the work.

13 8. Errors and Omissions.—The contractor will not be allowed to take advantage of any error or omission in these specifications, as full instructions will always be given should such error or omission be discovered.

9. Contractor's Responsibility.—It is understood and agreed that the contractor assumes full responsibility for the safety of his employees, plant, and materials, and for any damage or injury done by or to them from any source or cause.

10. Convict Labor.—In the prosecution of the work herein specified, the employment of persons undergoing sentences of imprison

ment at hard labor which have been imposed by courts of the several States, Territories, or municipalities having criminal jurisdiction is prohibited.

11. Objectionable Employees.—The contractor will be required to discharge any employee who, in the opinion of the Contracting Officer, is objectionable or incompetent. Such discharge shall not be made the basis of any claim for compensation or damages against the United States or any of its officers or agents.

12. Contractor to be Present or Represented.—The contractor must at all times either be personally present upon the work or be represented thereon by a responsible agent, who shall be clothed with full authority to act for him in all cases and to carry out any instructions relative to the work which may be given by the Contracting Officer, either personally or thru an authorized representative.

13. Sundays, Holidays and Nights.—No work shall be done on Sundays or legal national holidays except in cases of emergency, and then only with the consent of the Contracting Officer; work at night will be permitted with such restrictions regarding lighting, blasting, etc., as the Contracting Officer may deem desirable.

14. Eight-Hour Law.—The attention of bidders is called to the following act of Congress:

14 *An Act Relating to the Limitation of the Hours of Daily Service of Laborers and Mechanics Employed upon the Public Works of the United States and of the District of Columbia.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the service and employment of all laborers and mechanics who are now or may hereafter be employed by the Government of the United States, by the District of Columbia, or by any contractor or subcontractor upon any of the public works of the United States or of the said District of Columbia, is hereby limited and restricted to eight hours in any one calendar day, and it shall be unlawful for any officer of the United States Government or of the District of Columbia or any such contractor or subcontractor whose duty it shall be to employ, direct, or control the services of such laborers or mechanics to require or permit any such laborer or mechanic to work more than eight hours in any calendar day except in case of extraordinary emergency.

Sec. 2. That any officer or agent of the Government of the United States or of the District of Columbia, or any contractor or subcontractor whose duty it shall be to employ, direct, or control any laborer or mechanic employed upon any of the public works of the United States or of the District of Columbia who shall intentionally violate any provision of this act, shall be deemed guilty of a misde-

meanor, and for each and every such offense shall upon conviction be punished by a fine not to exceed one thousand dollars or by imprisonment for not more than six months, or by both such fine and imprisonment, in the discretion of the court having jurisdiction thereof. * * *

(Act approved August 1, 1892, 27 Stats. L., 340.)

All bidders are advised that, should the contractors for the work fail to comply with this law, they will be reported by the officers of the War Department for such action as the Department of Justice may deem it proper to take.

This law does not prohibit the working of the contractor's
15 plant more than 8 hours per calendar day, providing two or more crews are employed, and it has been held by the Supreme Court not to apply to dredging and rock excavation done in the wet from floating plant.

15. Commencement, Prosecution and Completion.—The contractor will be required to commence work under the contract within thirty (30) days after the date of receipt of notification of approval of the contract by Chief of Engineers, U. S. Army, to prosecute the said work with faithfulness and energy, at such proportionate and regular rate that it will be completed within 18 months after said receipt of notification.

16. Time.—The time allowed in these specifications for the completion of the contract to be entered into is considered sufficient for such completion by a contractor having the necessary plant, capital, and experience, unless extraordinary and unforeseeable conditions supervene.

17. Payments.—Payments will be made monthly, subject to the provisions of paragraphs 54 and 55. A percentage of ten (10) per centum will be reserved from each payment until the completion of the contract.

Description.

18. Project.—The work to be done under these specifications is to excavate a portion of the new navigation channel, build canal walls and piers, prepare a new headrace and forebay, with controlling works, ice passages and weir, remove existing and build new dikes, and furnish all the labor, plant and supplies necessary to perform the required work as specified in greater detail below.

19. Location.—The work is located at Sault Ste. Marie, Michigan, on the north side of St. Marys Falls Canal. The site may be made accessible by rail, by boat during navigation season, and by teams in winter. The contractor will be permitted to occupy such portions of the unoccupied canal lands as may be designated by the Contracting Officer, for storing machinery, supplies and materials used on this work.

16 It is expected that each bidder will, prior to submitting his bid, visit the site of the work, examine the local conditions,

inform himself as to the accessibility of the work, ascertain the character of the material to be excavated, consult the plans on file at the U. S. Engineer Office at Sault Ste. Marie, Mich., and obtain such available information as will assist him to make an intelligent bid, and the failure of a bidder to make such examination may be held to be sufficient reason for rejecting his bid.

20. Drawings.—Eight sheets of contract drawings, including a map of the locality and general plans of work to be done, may be consulted at the U. S. Engineer Offices at Detroit and Sault Ste. Marie, Michigan, and work is to be based upon these drawings and such others in amplification and modification of the same as may be furnished by the Contracting Officer during the progress of the work. The contract drawings include the following:

Sheet No.	Drawing No.	Subject.
1	301	General map of location.
2	350	Limits of canal dredging and surface elevations.
3	133	Surface elevations over dry work areas so far as determined.
4	366	Details of timber crib canal piers.
5	367	Details of concrete canal walls on rock.
6	368	Details of concrete superstructure of canal piers.
7	344	General plan and details of controlling works and weir masonry.
8	358	Details of headrace rib-dam.

21. Surveys.—The surveys are referred to a rectangular coordinate system with lines respectively parallel and perpendicular to the axis of the Poe lock, as shown on drawing No. 301. Elevations are referred to "canal datum," the zero of which is 120 feet below Bench Mark "A" on the upper coping of the Weitzel lock. The levels taken over the area are, in general, 10 feet apart. Some of the surveys required for making payments and for making detail
17 plans of certain parts of the work can not be made until after certain other portions of the work under the contract have been completed, and in such cases the quantities have been estimated from such information as is available, but before such work is commenced proper surveys will be made, upon the results of which, together with the final surveys, payment will be based.

22. Cofferdams and Pumping.—The contractor must construct and maintain all necessary cofferdams, furnish suitable and adequate pumping plant, and do all the pumping required to unwater all areas where work is to be done in the dry, and no special payment will be made therefor, the above work and expense being considered as incident to the general work and covered by the contract prices of other items, except that payment will be made for the construction and removal of the cofferdam accross the upper end of headrace, as specially provided in paragraph 35. Pumps will not be permitted

to discharge into the present canal. The United States assumes no responsibility whatsoever for loss of life, property or contractors' time, due to the failure of any part of the cofferdams, dikes, or the pumping plant.

I. Excavation of Navigation Canal.

23. Wet and Dry Work.—That portion of the proposed canal, lying between cross section about 950 west and the railroad embankment at International Bridge, shall be inclosed by cofferdams, and the work required to complete this portion of the canal shall be performed in the dry. Material for these cofferdams may be obtained from the excavation or dumps subject to the approval of the Contracting Officer. The above cofferdams are not to be removed under this contract. West of the cofferdam to be located at about 1,000 west, the work will be in the wet.

24. Canal Dredging.—The limits of dredging between sections 2,100 W. and 1,050 W. are shown on drawing No. 350. The material to be removed consists of Potsdam sandstone in place, 18 broken or soft rock, gravel, bowlders, hardpan, clay, timbers, crib work, etc., all in unknown proportions. All material must be removed within the above limits to a grade of 91 canal datum. Side slopes may be one horizontal to one vertical, unless flatter slopes are specially ordered by the Contracting Officer. The above limits indicate the toe of such one to one slope. For all material removed from within the above specified limits to grade 91 canal datum, and between said side slopes, payment will be made at the contract rate for class A material, and for all material removed from within the above specified limits and between the specified grade and a plane one foot below said grade payment will be made at one-half the contract rate for class A material, except over the site of the new northwest pier. The latter area shall be dredged to 91 canal datum, but no payment will be made for excavation below this grade, unless such excavation is specially ordered in writing by the Contracting Office, and areas excavated below this grade without such order must be filled at the contractor's expense, in a manner specified elsewhere. (See paragraph 28.) The area within the contour at 91 canal datum is about 51,500 square yards. The estimated amount of full rate material is 39,300 cubic yards and the possible amount of half rate material is approximately 16,800 cubic yards.

25. Canal Excavation in the Dry.—The limits of the canal excavation in the dry between the cofferdam located at about 1,000 W. and the embankment of the International Bridge are indicated on drawings Nos. 301 and 133. The material to be removed consists chiefly of Potsdam sandstone bed rock, portions of which are hard and in strata 5 feet or more in thickness, while other portions are soft, shaley, and freely seamed. The material overlying the rock is similar to that described in the preceding paragraph. It is esti-

mated that this material to be excavated in the dry consists of 200,000 cubic yards of rock and 75,000 cubic yards of overburden; it will all be considered as class B material. The rock shall be vertically channeled along the canal face of the proposed revetment walls. This channeling shall be completed in not more than two cuts, with one offset of 9 inches. When two cuts are required the upper one shall be carried to elevation 102 canal datum. The depth of this cut varies from 0 to 12 feet. The lower cut shall be carried from the rock surface, or from elevation 102, to or below elevation 93. Below elevation 93 a slope of $2\frac{1}{2}$ vertical on $2\frac{1}{2}$ horizontal will be permitted, all as shown on sheet five of contract drawings. The channel cuts must be clean, vertical and on as good alignment as can be obtained by the skillful use of a modern channeling machine. The channeling must be completed before any blasting is done within fifteen feet of the canal face, and only small charges of explosives shall be used near this face after channeling; in all cases the excavation must be so completed as not to disturb the channeled face, and to accomplish this result the side cuts must not be made first. If occasional places are found where the character of the rock is such that channeling cannot be done, vertical holes shall be drilled not more than one foot apart along the line of the wall, and such special precautions taken in removing the rock as the contracting officer shall direct, and the rock face shall be made practically smooth with no projections of more than three inches beyond the face, as above specified, and no sharp projections whatever. Only the area of the rock surface of the excavation actually channeled will be paid for as channeling.

All detached pieces of rock, weighing 5 pounds or more, shall be removed from the bottom of the completed excavation over that portion done in the dry.

In general, side slopes of one horizontal to one vertical will be allowed in earth and paid for. Should the material not stand at the above prescribed slope in any portion of the work, flatter slopes may be ordered, in writing, by the Contracting Officer, and when such slopes are made in accordance with such order, payment will be made accordingly. All material, including loose, soft, or unsound rock must be removed from the site of the revetment walls within limits fixed by the Contracting Officer as the work proceeds, according to the condition of the rock, and for all material actually excavated within such specified limits, payment will be made as for other class B material.

26. Disposal of Excavated Material.—Material excavated by dredge shall be deposited on dumping grounds in St. Mary's River, located within one mile of the work, and designated by the Contracting Officer. Material excavated in the dry from the navigation canal may be used in the construction of cofferdams and dikes so far as it is approved by the Contracting Office for this purpose. Selected material may also be used for filling timber cribs. All other material from dry excavation, not otherwise disposed of to the satisfaction of the Contracting Officer, shall be deposited in specified dump-

ing grounds located within 1,500 feet of the limits of the work, and roughly graded as directed by the Contracting Office. These dumping grounds will include the spaces behind completed canal walls and piers, the site of the railroad embankment under the first fixed span of the International Bridge, and the graded approaches thereto, and embankment required for side track along south side of pier No. 1 of the bridge.

Sufficient tracks shall be furnished to reach all dumps at the same time, as lack of track will not relieve the contractor of making the proper disposal of material as ordered.

No payment will be made for filling, backfilling or dumps except as herein specially provided, as this is considered a part of the work of canal excavation and included in the price bid therefor.

II. Northwest Pier.

27. This work comprises the building, placing, and filling of about 925 linear feet of pier or revetment walls, composed of timber crib substructure with concrete superstructure. The timber cribs are to be in lengths of about 84 feet, and the concrete superstructure will be built in blocks about 28 feet long. The timber and iron
21 forming a part of the permanent work of the walls will be furnished by the United States.

28. Preparation of Foundation.—Where the surface of the ground at the site of the cribs is above elevation 91 canal datum, the material shall be carefully removed to that grade. If the underlying material should be considered by the Contracting Officer to be unsuitable for crib foundation, its removal will be ordered, and when removed will be paid for as class A dredging. The foundation bed shall be carefully leveled by a diver to form a suitable level bearing of firm material upon which to place the cribs, depressions below grade 91 being filled with gravel or other material acceptable to the Contracting Officer, and any filling required to do such leveling shall be furnished and placed by the contractor, without special compensation therefor, whenever the material has been removed below grade by the contractor, without special orders from the Contracting Officer. The filling, with gravel or other suitable material, of any original depressions below grade 91, or those where the removal of the material below grade was specially ordered by the Contracting Officer, will be paid for at the same rate as for crib filling.

29. Framing.—The forms of cribs, manner of framing and bolting, the position of ties and tie rods, and all other details shall be as shown in the contract drawings, and in such other drawings in minor modification of the same as may be furnished the contractor from time to time. The workmanship of framing shall be first class. The diameter of holes for drift bolts shall be one-sixteenth inch less than diameter of bolts, and the holes shall be bored the entire distance bolts are to be driven. Tenons must be accurately fitted to the corresponding gains so that a maul will have

to be used to settle the timbers in place. The cribs shall be kept square and true at all times. After the cribs are sunk and filled, as hereinafter specified, the Contracting Officer may require the top course of the walls of each to be leveled by a shimming course to the required horizontal plane fixed for the top of the substructure.

22 30. Placing and Filling Cribs.—In placing cribs, each one shall be held in its required position. When filled with stone, no point on its face shall be more than three inches out of proper alignment. The space between adjacent cribs shall not exceed six inches. Such temporary floors, decks, platforms and partitions as may be needed for use in sinking or filling the cribs shall be furnished and placed by the contractor without special payment therefor. The rock filling shall consist of selected hard broken sandstone taken from the excavation made in the dry, or material equally acceptable to the Contracting Officer, and must be so deposited in the cribs as not to injure any part of the work; no piece shall exceed three feet in the largest dimension, and only so much of small spawls shall be used as is required to fill the voids between larger stones. After settlement of the filling it shall be carefully leveled, and all large interstices filled with gravel or other suitable material, to make a proper foundation for the concrete superstructure. Payment will be made for the material deposited in the two front bays of the cribs, that is, the front 20 feet of the width, but no payment will be made for material dumped upon or into the lower back bays. The latter material, constituting a portion of the backfilling, may be the "run of the pit," provided no stones larger than 2 feet on the longest side be dumped until the slope has covered the back bays of the cribs. Backfilling must be dumped from the pier until the slope reaches its top. The placing of this backfilling is considered a part of the work of excavation and covered by the price bid therefor.

31. Concrete Superstructure.—The concrete superstructure, containing about 2,400 cubic yards, shall be of the general form shown in the drawings, and the concrete shall be mixed and placed in accordance with specifications hereinafter given for concrete.

Alternate sections of the superstructure blocks shall be built first and intermediate sections later. Between consecutive blocks shall be placed layers of gravel coated asphalt roofing paper, or other material acceptable to the Contracting Officer, making a
23 thickness of at least ⅛ inch. The foundation for the concrete block shall be prepared as specified under crib filling, and over this foundation shall be spread a burlap carpet which will lap up on the back face of the mold. Along the front face of the mold above the water level shall be fastened a strip of light canvas about 5 feet wide, which will line the face below the water line and lap over the burlap carpet, so as to prevent the washing of the concrete. Along the front and back inner faces of the mold below water level the concrete shall be composed of cement, sand and fine broken stone or screenings. The same mixture may be

required at other places where the work is under water, or where special finish is required. The channels shown in the drawings shall be securely set in the molds, the bolts securing them being put in place and the concrete filled around them, the bolts being maintained in correct position.

32. Completion of Backfilling.—After the completion of the superstructure the United States will place such electric conduits and other appliances as may be required, and thereafter the backfilling shall be completed by the contractor and graded as directed by the Contracting Officer.

III. Concrete Canal Walls on Rock.

33. The sides of the navigation canal, for that portion excavated in the dry, will consist of concrete walls founded on rock. There will be about 2,250 linear feet of this work, requiring about 17,500 cubic yards of concrete. This wall is to be built in sections about 30 feet long, alternate sections being built first and intermediate sections later. Between consecutive sections, or blocks, shall be placed layers of gravel coated asphalt roofing paper, or other material acceptable to the Contracting Officer, making a thickness of at least $\frac{1}{8}$ inch.

The foundation shall be prepared by removing from the site of the wall all loose, soft and unsound rock to such depth and width as the Contracting Officer directs. For material so removed
24 payment will be made as for other class B material. The concrete wall shall be built in accordance with the plans shown in drawing No. 367, with such minor modifications as the conditions of the work may require. Such weepers, reinforcing metal, bolts and other iron as may be furnished by the United States shall be properly set by the contractor without special payment therefor. Where the depth of concrete is not more than 10 feet the entire section shall be built as a monolith, concreting once started being continued until completed. Where the depth of concrete is between 10 and 15 feet a footing course may be built first, with upper surface at least 8 feet below the top of the coping, and where the depth exceeds 15 feet the concrete may be built in three stages under the same restrictions. (See paragraph 49.)

IV. Headrace and Forebay.

34. This work is designed to provide a new headrace for power plant, with forebay that may be used for filling locks or other purposes. The contractor must so arrange his work as not to interfere with the operation of the present headrace and any trestle constructed across the head thereof for transporting materials must be so arranged as to obstruct the flow as little as possible.

35. Cofferdam at the Head.—Beginning at the second pier of the bridge, running upstream about 200 feet, thence northerly about 475 feet across two spans of the bridge, as shown in the plans, a

cofferdam shall be constructed which, if made of rock and earth, is estimated to contain about 10,500 cubic yards. This dam shall be made practically watertight, and so maintained as long as required to do the necessary work in the dry. It shall be entirely removed to bed rock after this work is completed, and the material shall be deposited in designated dumping grounds the same as other excavation. For building, maintaining and removing this cofferdam the contractor will be paid a lump sum according to his bid, one-half of said amount being included in the first monthly estimate made after the headrace area has been successfully pumped out
25 showing the dam in good condition, and the remainder being included in the first monthly estimate made after the dam has been removed to the satisfaction of the Contracting Officer, said payments being subject to the retention of the usual ten per cent.

36. New North Dike.—Beginning at the north end of the above mentioned cofferdam extending down past pier No. 4 of the bridge to the site of the overflow weir, practically as indicated on drawing No. 301, a dike about 1,900 feet long shall be constructed having a top width of about 10 feet at elevation 121, with side slopes of one vertical to one and one-half horizontal. From about section 2050 on this dike a spur shall be continued easterly as a temporary dam to complete the inclosure of the area within which work is to be done in the dry. So much of the dike and temporary dam as may be necessary to unwater the area to be excavated for the power canal shall be built of broken rock from the excavation for the navigation canal, with such finer material, approved by the Contracting Officer, as may be required to make a watertight dam. The remainder of the dike may be built of suitable material excavated from the headrace. In the body of the dike no broken stones or bowlders shall be used larger than two feet in the longest dimension. The outer face of the completed dike shall be protected by a layer of broken stones or bowlders, and such layer may be composed of the larger pieces not accepted for the body of the dike. On the inner or south slope of the dike a layer of finer material shall be placed to make it practically watertight when entirely completed. If it is found not to be practically watertight after water is let into the new headrace, it shall be reinforced with suitable material to the satisfaction of the Contracting Officer. It is estimated that this dike will require about 23,000 cubic yards of material, but the United States does not guarantee that this amount of material will make a satisfactory dam, and whatever the amount required it shall be built at the contract price per linear foot for the dike alone.
No payment will be made for the construction of the tem-
26 porary dam at the east end of this dike to inclose the lower end of the work as the construction of this dam is considered a part of the excavation and concrete work to be done in the dry and covered by the price bid therefor.

37. Excavation.—The area within the limits indicated for the headrace and forebay, and north of the present dike, shall be ex-

cavated in the dry to the following grades: From the upper temporary dam to section 1900 E, elevation of grade 110; between sections 1900 E and 2600 E the grade will be a plane surface having an elevation of 110 at 1900 E and 103 at 2600 E; and east of 2600 E the grade plane will be at elevation 103; provided, that the Contracting Officer may change any or all of the above grades, such change not to exceed two feet in depth at any point. The material within this area is composed of rock in situ, broken and soft rock, glacial drift and timber. This material will be called Class C, and whatever its character it must be removed to the lines and grades established by the Contracting Officer. The estimated quantity is 15,000 cubic yards, but as survey cannot be made until the area is unwatered, this estimated quantity is subject to a variation of 35 per cent. All of the material above established grades shall be removed, and when so removed will be paid for, but there shall be no depressions left below the grades established by the Contracting Officer exceeding two feet in depth. The material shall be sorted and disposed of as directed by the Contracting Officer. In general, the coarser material shall be placed on the outside and in the body of the new north dike, and the finer material in the south slope and for top dressing, as specified elsewhere. Excess material not required for said dike shall be used in extending a tailrace dike, or be placed in dumping grounds as directed by the Contracting Officer. No special payment will be made for the disposal of the material from this excavation, except as it forms a part of the new north headrace dike paid for by the linear foot.

27 V. Controlling Works, Ice Passages, and Weir.

38. This work consists in building, at the lower end of the forebay, all masonry required for the installation of Stoney gates, ice passages and weir, including the placing of footbridge and all other iron work that is to be built into the masonry, practically in accordance with the plans shown on drawing No. 344. For the controlling works four piers are required, including three gate sills and their foundations with paving, the roller tracks built into the concrete, and the masonry arches between the piers. The ice passages require three piers with masonry sills and arches between them. The weir is a submerged masonry dam one hundred and fifty feet long, with a footbridge above and an abutment where it joins the new north dike. The furnishing and erection of the Stoney gates of the controlling works, and the furnishing and placing of the stop planks for ice passages do not form a part of this contract.

39. Construction.—The material on the site of these works shall be excavated to the depths indicated on the drawings, provided that all loose, soft and unsound rock shall be removed to the satisfaction of the Contracting Officer, though this may require greater depths of excavation than indicated. Payment for this excavation will be made at the price bid for class C. The preparation of the foun-

dations, building forms, etc., shall conform to the general specifications for concrete work. The several piers and abutments shall each be cast as a monolith. The concrete sills for the ice passages shall also be monolithic. The weir shall be built in sections about 30 feet in length. The wooden sills and all steel work to be imbedded in the masonry and forming a part of the permanent work will be furnished by the United States, but shall be accurately set by the contractor and built into the concrete to lines and grades given by the Contracting Officer. Adjacent to the timber sills for the Stoney gates shall be constructed concrete aprons paved with brick, as shown in drawing No. 344. These brick shall be
28 first class vitrified paving brick acceptable to the Contracting Officer and shall be furnished and laid by the contractor in the fresh concrete as directed by the Contracting Officer. It is estimated that about 15,000 of these brick will be required. They will be paid for at the price bid and will be measured in the work as though they were a part of the concrete and paid for as such, but no other payment will be made for such furnishing and laying.

VI. The Removal of Present North Dike and Construction of New South Dike.

40. After the completion of the dry excavation and masonry as specified, that portion of the present north dike lying east of section 2450 E and that portion west of section 2100 E shall be removed to bed rock by dredging. The site of the permanent crib portion of the new south dike shall also be dredged to bed rock. This dredging will be considered class D material and will be paid for by the cubic yard, bank measure. The material so dredged shall be deposited to form a new south dike as shown on general drawing No. 301. This dike is to extend from the railroad bridge to section 2450 E, where it joins the undisturbed portion of the present north dike. This new south dike shall have a top width of about 10 feet at elevation 121 canal datum. Its north side shall be formed of the finer material from the above dredging, it shall have a slope of about one vertical on one and a half horizontal, and shall be built to the lines given by the Contracting Officer. No payment will be made for the construction of this portion of the new south dike, as it is considered incident to the dredging and included in the price bid therefor.

41. Cofferdam at East End of New South Dike.—About 152 feet of the new south dike, adjoining the present south wall of the forebay near the power house, shall be composed of a crib work structure practically in accordance with drawing No. 358. The
29 foundation shall be prepared by removing from the site all earth, loose and unsound rock, and other material, and cleaning the bottom so that the foundation shall be sound rock, and as nearly a plane surface as the character of the rock will permit, all to the satisfaction of the Contracting Officer. Accurate soundings shall then be taken by the contractor and the bottom

of the cribs shall be framed to fit the rock, and the east end of the crib to fit the concrete wall now in place. The framing and bolting of the cribs shall be subject to the same specifications as for the crib of the new northwest pier. As the crib is framed the face joints on the north face of the crib shall be calked oakum to make this face watertight. After sinking the cribs in place the contractor shall fill them with suitable material excavated from a borrow pit designated by the Contracting Officer, and located within 1,000 feet of the work. The necessary fillings around the west end, and the backfilling, shall be placed from the same borrow pit. Clay from nearby stockpiles must be placed as filling along the toe of the crib and also in the end pockets as indicated in the drawing. It is estimated that for these cofferdam cribs there will be required, in addition to the preparation of the foundation, 12,500 cubic feet of framing, 2,500 cubic yards of filling, back-filling and clay. Payments will be made for the above work as follows: Dredging for foundation will be considered class D; framing, calking and sinking the same as for northeast pier framing; material taken from borrow pit for filling and backfilling, including placing of clay, will be considered the same as class B excavation.

VII. Materials.

42. Cement; Furnishing and Delivery.—The cement shall be a true Portland cement, suitable to work of the highest quality, conforming with "Specifications for American Portland Cement" in Professional Papers No. 28, Corps of Engineers, U. S. Army, pages 30-33, with the following modifications: Fineness: It shall leave a residue of not more than 25 per cent on a sieve having from 30 188 to 200 meshes to the inch made of brass wire of .0024 inch diameter. Tensile strength: Mortar containing 3 parts Standard Ottawa sand to one part cement and sufficient water to make a plaster mortar; briquets, 7 days old, not less than 175 pounds; briquets, 28 days old, not less than 280 pounds; the mortar to be mixed with hoe in iron mixing box and pressed in molds with the fingers. Sulphuric acid and magnesia: The cement shall not contain more than 1.75 per cent anhydrous sulphuric acid (SO_3), nor more than 4 per cent of magnesia (Mg. O). Analyses of the cement may be required from time to time, said analyses being made at the contractor's expense by a testing laboratory approved by the Contracting Officer. The contractor shall erect suitable buildings for the storing of cement, subject to the approval of the Contracting Officer. The cement shall be piled as directed by the Contracting Officer, and after acceptance will be issued to the contractor as required for immediate use on the work. Sufficient cement shall be kept on hand for use during the succeeding month, so that time may be had for 28-day tests. Cement may be accepted and paid for on the results of tests, but the United States will not be responsible for the preservation of cement even though paid for, and it will be subject to retest at any time before used. If the cement deteriorates or is damaged it will be rejected and must be replaced by acceptable

cement. Rejected cement shall be promptly removed from the work by the contractor. Payment for cement will be made by the barrel of 375 pounds net, and no payment will be made for sacks. Cement injured or wasted on the work must be replaced by the contractor free of charge.

43. Sand.—The sand shall be composed of varying sizes of sound hard grains. It shall be free from loam, decayed rock and other injurious substances, and be satisfactory to the Contracting Officer. A sample of satisfactory sand may be seen at the U. S. Engineer Office, Sault Ste. Marie, Michigan.

44. Gravel and Broken Stone. The use of gravel for a portion of the aggregate is optional with the contractor, but if any is used
31 it shall not exceed one-half of the volume of broken stone. Gravel and broken stone shall be free from loam, decayed rock and other injurious substances. Gravel shall be composed of granite or other hard rock, ranging in size from one-fourth of an inch to two and one-quarter inches in diameter. Broken stone shall be crushed from sound granite, trap or limestone, and shall not contain more than 5 per cent of sandstone. It shall be separated into two sizes; the pieces in the "coarse" size shall pass a 2¼ inch ring, and not pass a ¾ inch ring. The "fine" size shall be composed of pieces that will pass a 1 inch ring.

45. Timber and Iron.—All timber and iron forming a part of the permanent work will be furnished by the United States, unless otherwise specially provided herein. These materials will be delivered to the contractor either on the canal grounds or f. o. b. boat or cars at Sault Ste. Marie, Mich., at the option of the United States, and must be transported to the site of the work by the contractor. If the materials are delivered to him on board cars or boat they must be unloaded promptly by the contractor and piled as directed by the Contracting Officer, and the contractor shall pay any switching or demurrage charges there may be. The delivery of materials to the point where they are to be used is considered a part of the work in which they are incorporated, such as framing or concrete, and no special payment will be made for such delivery.

46. Concrete, Proportions.—The cement, sand and broken stone or gravel shall be mixed in such proportions as may be directed by the Contracting Officer. The amount of gravel, if used, shall not exceed one-half of the broken stone, and the proportion of the "coarse" size of broken stone will greatly exceed the "fine" size, the object being to obtain a mixed aggregate with as few voids as possible. The mortar will ordinarily be made from one part cement and two to three parts sand by weight, and the proportion of mortar used in the concrete will be somewhat in excess of the voids in the aggregate.

Mortar composed of cement and sand, and granolithic con-
32 taining fine broken stone must be supplied as required for special purposes, but such mortar and granolithic will not exceed three per cent of the concrete. The measurement of materials will be by bottomless boxes in which the materials may be cast and

leveled off; by a properly constructed double gate in a bin chute; or by the use of suitable carts or barrows having square or cylindrical bodies expressly designed for this purpose. The contractor will change the sizes of measuring boxes whenever such alterations may be required by irregularities in the condition of the sand and aggregate, or by changes in the proportions to be used. Clean water at the temperature required by the Contracting Officer shall be used for mixing.

47. Mixing.—Concrete may be mixed by hand or by machine mixers. Hand mixing must give a result equal to that obtained by an approved machine mixer. A machine used for concrete mixing must be a batch mixed of a form approved by the Contracting Officer. The materials for each batch shall be accurately determined as specified above, and the aggregate shall be wet, if required, before being placed in the mixer. The materials shall be fed to the mixer in such manner as to obtain the best results. The mixing shall be continued long enough to insure a thorough incorporation of the ingredients, with the mortar uniformly distributed throughout. The mixer shall be dumped clean of each batch. The consistency of the concrete shall be varied as required, but in general the consistency will be such that it will quake after it is well rammed in place. The concrete shall be transported from the platform or mixer to the place it is finally to occupy in the work with promptness and in such a manner as not to separate in any degree the component parts.

48. Forms.—The forms shall be constructed of sound lumber, free from rot, shake, and loose or unsound knots. Planks forming the sheathing shall be not less than 1¾ inches thick, and in case supports are more than 3 feet apart 2¾ inch sheathing will be required.

333 Sheathing plank shall be dressed on both sides, tongued and grooved, center matched, and shall be neatly butted. When in place the planks shall be horizontal and the inner surface of the mold shall be smooth and even. Where planks are used a second time they shall be thoroughly cleaned and, if necessary, the edges and ends shall be freshly jointed. The posts and braces shall be of sufficient strength to make a practically unyielding support to the sheathing. Posts shall be sized by dressing on the side which is to receive the sheathing in order that the alignment may be perfect. The parts of the form shall be so firmly fastened together that it will withstand all jars and strains to which it may be subjected. If tie rods used for this purpose are intended to remain permanently in the concrete, they must be provided with sleeve nuts or other suitable connections, such that the rod does not extend nearer the face of the concrete than two inches, and the small holes left in the face of the concrete on the removal of the stub ends from the sleeve nut or other fastening shall be properly filled with mortar after the removal of the form. If the contractor elects to remove the tie rods the arrangement to permit such removal and the filling of the voids so left shall be made satisfactory to the Contracting Officer. Forms shall in all cases be substantially built in a first-

class workmanlike manner, assuring perfect alignment and finish to the concrete surface without subsequent patching. Molds may be lined with sheet steel for work in Summer if the contractor so elects, provided adequate precautions are taken to insure proper joints. If so lined the steel shall be well greased with salt pork fat. If not so lined the interior of the mold shall be coated with soft-soap or other suitable lubricant to prevent the adhesion of the concrete without staining it. All cost of whatever character connected with the building of forms or molds must be covered by the contract price for concrete.

49. Placing.—Before placing concrete on rock the latter shall be thoroughly cleaned of loose and unsound rock and debris of any kind and a thin layer of mortar shall be spread on the rock, filling all cracks, and coating the surface just before placing of concrete
34 begins. The molds shall be accurately set by the contractor to grade and line established by the Contracting Officer, and securely fastened in place. The contractor will be responsible for any settlement or distortion of forms; and he shall replace at his own expense any defective work. Concrete shall be dumped as nearly as possible in the place it is to occupy in the work, and in layers not exceeding eight inches in thickness, and shall be thoroughly rammed with iron rammers having a face of about three by six inches, and weighing about 30 pounds, or by a pneumatic rammer approved by the Contracting Officer. Such special rammers and forks shall be used near the face as may be required to give the desired finish. The manner of placing concrete under water for the super-structure of the northwest pier is described above. Other concrete shall not be deposited in water except with the special permission of the Contracting Officer, and then in such manner as he may specially direct. Bowlders or stones selected from the hardest ledges and being sound pieces of good shape, not less than one foot by one foot, nor more than three feet by three feet, on base, and with thickness about one-half of length, may be imbedded in the concrete, if carefully cleaned and wet, and placed in a thin layer of mortar. No such stone shall be placed nearer than one foot to the face of the work to be exposed, nor nearer than six inches to any other face of the mold, or any other stone. At all horizontal joints separating the work of different days such bonding stones shall be placed with one-half of each stone imbedded in the last layers of concrete. The contractor shall also take from designated places on the canal grounds such iron bolts as may be furnished by the United States and properly imbed them so as to form a bond between consecutive layers of concrete. He shall also imbed such reinforcing metal, foundation bolts, structural steel or pipes for weepers as may be furnished by the United States. Such stone and iron built in the concrete will be measured as though it were concrete, and the price bid for concrete shall be considered to cover the cost of all such work. The top of the concrete
35 shall in general be kept as nearly horizontal as may be during the process of placing, unless otherwise ordered by the Contracting Officer, one layer being completed before another is

started, and layers of concrete must not be run out to a thin edge. In joining concrete to a surface already set where a bond is desired, the surface shall be thoroughly washed, scrubbed with wire brooms and all loose material removed, after which a small amount of rich mortar shall be brushed over the surface and the fresh concrete applied directly thereafter.

50. Facing.—The exposed faces of the concrete shall be finished smooth without visible voids. It is expected that this will be accomplished by proper precautions in placing the concrete next the forms, by pressing the stones back from the sheathing and by proper ramming, but if not, a granolithic facing will be required. If a granolithic mixture containing fine crushed stone is used for this purpose the same shall be mixed in small quantities and thoroughly compacted in thin layers next to the molds by means of special plates and edge rammers, and carried up with the concrete and a thorough bond be obtained with the latter. The mortar or granolithic forming the top surface of the coping shall be applied immediately after the concrete is placed, and shall be given a rough sand finish. The top surface shall be made perfectly level unless otherwise provided for in the plans. After the removal of the sheathing plank all exposed faces above low water level shall be given a rubbed sand finish satisfactory to the Contracting Officer.

51. Removing Molds.—Molds shall in general remain in place about 3 days, but whenever considered necessary or expedient, by the Contracting Officer, this time may be increased or diminished. The contractor shall be responsible for any injury done to the concrete in removing the molds or injury from any other cause, and shall repair any damage done or replace any sections of the work which may become so damaged, prior to the acceptance of the entire work of which such section forms a part, the cost of cement for such repair or replacement being deducted from any money due or that may become due him. After the removal of molds the concrete shall be kept damp for ten days by covering with burlap and wetting same frequently, or by other method approved by the Contracting Officer.

52. Winter Concrete.—Whenever concrete is placed at such a time that the Contracting Officer considers special precautions are necessary to prevent freezing, the contractor must provide ample steaming capacity and make such other special preparations as may be required to secure as good work as is done at other times. All frost shall be removed from the crushed stone and gravel, the sand and water shall be heated to 150° Fahr.; the mixer shall be housed and the concrete delivered and placed while warm; the forms shall be built up and covered with canvas or otherwise; radiators or live steam shall be used within the form sufficient to keep the temperature above 35° Fahr. during, and for at least three days after, the placing of concrete; the forms must remain in place much longer than in warm weather. In addition to the above, such other precautions shall be

taken as may be found necessary to secure first-class work in every respect.

General Provisions.

53. Quantities.—The following estimate of materials and work is approximate only. These quantities will be used as a basis for determining the lowest bidder, but the contractor must furnish such materials, appliances and labor as may be required to complete the work, provided the increase or decrease in any of the quantities does not exceed the percentage of variation stated for each class of work. Bidders must name a price per unit for each class of material or work, but the aggregate determined from the prices bid, and the approximate quantities stated for the work let, will be considered as one bid.

37 Excavation.	Estimated quantity.	Possible variation.
Class A, dredging navigation canal	47,700 cu. yds.	25%
Class B, dry work, navigation canal	275,000 cu. yds.	25%
Class C, dry work, headrace and forebay	15,000 cu. yds.	35%
Class D, dredging, headrace and forebay	15,000 cu. yds.	30%
Channeling	36,600 sq. ft.	30%
Crib framing and placing, timber	154,000 cu. ft.	20%
Crib filling	13,000 cu. yds.	20%
Construction and removal of west cofferdam, headrace and forebay	Lump sum price	
Construction of new north dike	1,900 lin. ft.	10%
Concrete (exclusive of cement)	22,000 cu. yds.	30%
Furnishing and delivering cement	27,500 barrels	30%
Furnishing and delivering vitrified paving brick	15,000 bricks	25%

54. Measurements and Payments.—Payment will be made at full contract rates for material of classes A and B excavated within the specified limits and slopes and above the specified grade planes (91 canal datum for class A and 90.5 canal datum for class B); payment for material removed from within the specified limits and not more than one foot below the specified grade planes will be made at one-half contract rates, except on site of canal walls or piers, but no payment will be made for material excavated from a greater depth than one foot below said specified grade planes, except as specially provided in paragraph 28.

Payment for class C material within the specified limits and above the specified grades will be made at full contract rates, and for material removed within said limits and not more than one foot below said grades payment will be made at one-half contract rates, provided, that on the site of concrete structures forming a part of the headrace and forebay, payment at full rates will be made for all

material excavated in accordance with the orders of the Contracting Officer.

Payment for the removal of portions of the present north dike to bed rock, and the removal of the material overlying the foundation for the cofferdam at its easterly end, will be made for the actual excavation to bed rock at full contract rates for class D materials.

38 The unit of measurement for all excavation will be a cubic yard measured in the bank. The proper disposal of excavated material shall be considered a part of the work of excavation, and no extra compensation shall be made therefor, except when material is used for filling cribs of canal piers or for construction of new north dike, for which payment is specially provided herein.

Payment for channeling will be made for the rock face actually channeled, the unit of measure being the square foot.

Payment for framing cribs will be made only for the timber actually in the completed structure, the unit of measure being the cubic foot; provided, that no deduction will be made for gains. The placing and sinking of cribs, the transfer of materials to the work, and the placing of all iron shall be considered a part of the work of framing and included in the price bid therefor.

Payment for filling the cribs of the new northwest pier will be made only for the material actually placed in the front vertical bays of the crib, and measured in a compact condition, after thorough settlement, the unit of measure being the cubic yard. Payment for filling and backfilling the cribs of the cofferdam at east end of new south dike will be made as for excavation of class B material, the unit of measure being the cubic yard measured in the bank.

Payment for construction and removal of the cofferdam at the west end of the headrace will be made as a lump sum, an estimate for one-half of the amount being made on the completion of the dam and its acceptance by the Contracting Officer after the headrace has been pumped out, and an estimate for the remainder being made after the dam has been removed to the satisfaction of the Contracting Officer.

Payment for the construction of the new north dike will be made at the contract price per linear foot of dam completed in accordance with the plans and made practically watertight to the satisfaction of the Contracting Officer.

39 Payment for concrete will be made for the amount actually laid in place, including the iron and stone built into the mass, and also including small vertical openings or cavities built into the concrete in accordance with the plans and not exceeding two square feet in cross section. The unit of measure will be the cubic yard of concrete after hardening, and the transfer of materials and setting of all iron, stone, timber and brick in the mass will be considered as part of the work of placing concrete.

Payment for cement will be made at the contract rate per barrel for all cement accepted by the Contracting Officer, and the delivery, storage and transfer of the cement to and from the warehouse will be considered a part of the work of furnishing, and covered by the

contract price per barrel. Each barrel of cement shall weigh not less than 375 pounds net, and no payment will be made for sacks.

Payment for vitrified brick will be made at the price bid per thousand for the brick actually placed in the work as specified. The volume occupied by the brick will be measured as concrete and no other payment will be made for laying the brick.

Monthly payments will be based upon such approximate estimates as may be made during the progress of the work; subject to verification by accurate surveys made during that period. Monthly payments for crib framing will be made on the basis of the amount of timber actually framed in the cribs during the month at 60 per cent of the contract price therefor, and for the amount of timber framed in cribs actually placed during the month at 40 per cent of said contract price.

The final estimate will be based on original surveys shown by maps on file in the U. S. Engineer Office at Sault Ste. Marie, Mich., and such others as may be made during the progress of the work and upon further survey to be made as soon as practicable after the completion of the entire work. But final payment will not be made until all the work has been completed in accordance with these specifications to the satisfaction of the Contracting Officer.

55. Authority.—The work will be done under the continuing contract system, as authorized by the River and Harbor Act of March 2, 1907, viz:

"Improving Saint Marys River at the Falls, Michigan: For the construction of a new lock, with a separate canal, in accordance with plan 'Three,' set forth in House Document Numbered Three Hundred and thirty-three, Fifty-ninth Congress, second session, one million two hundred thousand dollars; Provided, That the Secretary of War may enter into a contract or contracts for such materials and work as may be necessary for the construction of said lock and canal, to be paid for as appropriations may from time to time be made by law, not to exceed in the aggregate five million dollars, exclusive of the amounts herein and heretofore appropriated or heretofore authorized."

The amount of funds at any time available for work under this contract may be determined by deducting from the total available for expenditures for Improving St. Mary's River at the Falls, Michigan, the amounts allotted or estimated as necessary for other work connected with such improvement, including all contingencies of engineering, superintendence, etc. At present about $1,680,000 is available for all work connected with this improvement.

In case the available funds become exhausted before the completion of the contract, the Contracting Officer will give thirty days' written notice to the contractor that work may be suspended; but, if the contractor elects, he may continue work as long as there are funds available for inspection and superintendence, under the conditions and restrictions of the specifications, after the time set by such notice, with the understanding that no payments will be made for such work until additional funds have been provided in sufficient

amount. In case no additional funds become available within one calendar year from the date named in the written notice under which work may be stopped, the percentages retained for work done prior to said date will be surrendered and paid over to the contractor.

41 When funds become available the Contracting Officer will give written notice to the contractor and work must again be commenced within thirty days after receipt of said notice.

56. Prosecution and Order of the Work.—After the date fixed for the commencement of work it must be prosecuted daily, except on Sundays and legal holidays, during such reasonable working hours as may be mutually agreed upon by the Contracting Officer and the contractor from time to time; unless specially permitted by the Contracting Officer in cases of emergency, no work shall be done on Sundays and legal national holidays other than pumping, repairs to plant, laying of track and similar auxiliary operations not forming a part of the work of the contract for which payment is made. Night work will be permitted under such restrictions regarding lighting, blasting, etc., as the Contracting Officer may deem desirable.

Should the contractor fail to prosecute his work or any part thereof as herein indicated, or as hereafter directed, the Contracting Officer shall have the right, after due notice in writing to the contractor, to use such portions of the contractor's plant as may be needed, and employ the necessary labor to operate said plant, or to procure and operate any other or additional plant or force that he may consider needed to insure the requisite rate of progress, and to pay the cost from any money due the contractor or that may become due him; provided, that any time lost on account of exhaustion of funds (as specified in paragraph 55) will be added to the final time limit above indicated.

The work must be carried on at such points and in such order as the Contracting Officer may direct from time to time, and in such manner as not to delay or unnecessarily interfere with or damage the work of any other contractor or the United States.

In order to complete the contract within the time specified sufficient plant and force must be used to prosecute several parts of the work at once. The northwest pier is desired for early use,

42 and the preparation of the foundation therefor and the building of cribs must be commenced within 30 days after receipt of notification of approval of contract, and prosecuted at such rate as to complete this part of the work, including the concrete superstructure and backfilling, within eight months from said date fixed for commencement. The early completion of the headrace is also necessary, and the contractor will be required to commence work on the cofferdams and dikes surrounding the area within 45 days after receipt of notification of approval of contract and to complete all concrete work in connection with the headrace and forebay within eight months from said date fixed for commencement.

The excavation in the dry for navigation canal will furnish material for use in other parts of the work, such as crib filling and the

construction of dikes and dams, and must be so prosecuted as to furnish the desired class of material at the time it is needed for such other work.

57. Supervision.—The work will be conducted under the direction of the Contracting Officer, who shall have power to prescribe the order of executing the same in all its parts.

Failure on the part of the Contracting Officer to reject inferior work or materials shall not be construed to imply acceptance of such materials or work, and the United States reserves the right to reject defective materials and to require the contractor to make good work that has been improperly done or in which such defective materials have been used, at any time previous to the final acceptance.

In case of differences arising between the United States agent in charge and the contractor, in regard to the work or to the specifications, appeals may be made by either of them to the Contracting Officer, and his decision shall be accepted as final.

The Contracting Officer will set such marks for line and level as may be necessary to properly carry on the work, and will make such surveys as may be needed for estimates, provided that the contractor shall furnish, without additional compensation, all stakes and
43 buoys that may be required in connection with dredging and dumping, and the necessary assistance to the Contracting Officer for setting them, as well as the use of a tug for that purpose, or when needed for towing sounding raft or scow, reading water gauges, transferring Government employes to or from work, and generally for any purpose connected with its supervision.

The contractor shall furnish regularly to inspectors on dredges or other floating plant a suitable room for office and sleeping purposes, and shall furnish to the inspectors on such work suitable board equal to any furnished any of the contractor's agents, such accommodations to be paid for by the United States at special rates, as follows: $0.60 per day or $0.20 per occasional meal per person. The contractor shall also furnish for inspectors on dry work a suitable field office of not less than 400 square feet floor space, properly heated and lighted.

58. Side Tracks, etc.—Should a side track be established by the United States on the north side of present canal and connecting with the track on International Bridge, the contractor may run a spur from said track to the site of his work along a route approved by the Contracting Officer, and will be permitted to use the sidetrack for receiving materials, paying any switching charges the Bridge Company may levy therefor. He must not obstruct this track, however, when not in service for such switching. The United States shall be permitted to use the contractor's tracks, for delivering cars of material as may be occasionally required, without charge for said use, but on the payment of reasonable switching charges in case the contractor's locomotive is used for hauling cars.

59. Navigation Not to be Obstructed.—The contractor shall so dispose his plant and regulate its operations as to afford every possible

facility to the passage of commerce in the vicinity of his work. The plant must not occupy a greater width of the channel than necessary, and the completion of one portion of the channel may be required before the remaining portion is entered upon.

44 60. Marks, Lights and Signals.—The contractor shall provide and maintain such day marks, night lights, and signals in connection with his work as to provide safe and conspicuous aids to navigation while operations are in progress, and any other that may be considered necessary by the Contracting Officer, and shall be responsible for any failure or neglect in this respect. Should the contractor fail to comply with this requirement, the Contracting Officer shall have the right to procure, at the contractor's expense, the necessary men and material to fill this requirement.

61. Explosives.—Explosives shall be stored in a bullet proof building, located at a point remote from buildings and from the work in hand, and not more than one thousand pounds will be permitted in one magazine on the canal grounds at one time. No exploders shall be kept in the same place with explosives. Adequate precautions shall be taken to prevent accident in handling explosives, approved methods shall be employed in thawing them, and they shall be brought near the work only in such quantities a may be required for immediate use. The Contracting Officer may direct the use of explosives of moderate power whenever he considers their use necessary to prevent damage to the work in hand or property or work in the vicinity, but failure to give such directions shall not relieve the contractor from the responsibility for any damage that may be done.

62. Complete Work.—The contractor shall not take advantage of any errors, ambiguity or omission of details in specifications or drawings, but he must do everything which may be necessary to carry out the contract in good faith, which contemplates all work necessary to secure the results described. Any point not clearly understood must be immediately referred to the Contracting Officer for decision, prior to execution. (See also paragraph 8.) It is the true intent of these specifications to provide for all contingencies that may occur during the progress of the work, in order that the prices named in proposals shall determine the whole cost to the United States.

45 It must be understood that the partial payments and acceptance provided for in this instrument will not relieve the contractor of his obligation to complete the contract as a whole in accordance with the intent of these specifications.

63. Clean Up.—The contractor will be required to remove, at his own expense, any material which by reason of his operations may be left on canal grounds or dropped into the canal or river outside of the prescribed dumping grounds, and within sixty days after completion of the contract he shall remove from the canal lands all plant, surplus materials and temporary structures built by him.

64. Claims and Protests.—If the contractor considers any work required of him to be outside of the requirements of the contract,

or considers any record or ruling of the United States agent as unfair, he must ask for written instructions or decisions immediately and then file a written protest against the same within thirty days thereafter, or be considered as having waived all future claims to any payments, except at rates of the existing contract, to be decided by the Contracting Officer.

65. Responsibility.—The contractor will be responsible for the protection and maintenance of the work until final acceptance, and shall maintain such lights and provide such other safeguards as the Contracting Officer may require, but such lights and safeguards will not relieve the contractor of responsibility for the protection of the work; provided, that upon the completion of the northwest pier including the backfilling, to the satisfaction of the Contracting Officer he may accept this portion of the work and permit its use for navigation purposes, and in that case the contractor will be relieved of the responsibility for any injury thereto not occasioned by his operations. The work shall be so planned throughout as to reduce to a minimum the liability of injury to existing or complete work, to vessels passing in the canal, or to persons lawfully in the vicinity of the work.

46 *Proposal.*

Chicago, Illinois,
August 29th, 1910.

To Colonel C. McD. Townsend,
Corps of Engineers, U. S. A.,
Jones Building, Detroit, Mich.

SIR:

In accordance with your advertisement and specifications of July 30, 1910, inviting proposals for Canal and Headrace Construction, St. Marys River, Michigan, and subject to all the conditions and requirements thereof, a copy of which is hereto attached, and, so far as they relate to this proposal, are made a part of it, we propose to furnish all machinery and appliances, do the specified work, and furnish the specified material at rates as follows:

For Excavation of Material of "Class A," at Two (2) dollars and fifty-five (55) cents per cubic yard, bank measure.
For Excavation of Material of "Class B," at One (1) dollar and fourteen (14) cents per cubic yard, bank measure.
For Excavation of Material of "Class C," at — (—) dollars and eighty (80) cents per cubic yard, bank measure.
For Excavation of Material of "Class D," at One (1) dollar and fifty (50) cents per cubic yard, bank measure.
For Channeling Rock, at Thirty-three (33) cents per square foot of channeled face.
For Framing Timber Cribs, including bolting and placing, at Thirteen (13) cents per cubic foot in place.
For Filling Timber Cribs, at Thirty-six (36) cents per cubic yard in place.

For Construction and Removal of West Cofferdam, Headrace and Forebay, the lump sum of Fifteen thousand (15,000) dollars.
For Construction of New North Dike, at Eight (8) dollars and fifty (50) cents per linear foot.
47 For Concrete, including Materials (except cement), Mixing and Placing, at Four (4) dollars and fifty (50) cents per cubic yard in place.
For Furnishing and Delivering Cement, at One (1) dollar and forty (40) cents per barrel.
For Furnishing and Delivering Vitrified Paving Brick, at Fifteen (15) dollars and — (—) cents per thousand brick.

With half rates as provided in paragraph 54 of specifications.

We make this proposal with a full knowledge of the kind, quantity, and quality of the plant, work and materials required, and, if accepted, will within ten days after receiving written notice of such acceptance enter into contract, with good and sufficient sureties for the faithful performance thereof.

MacARTHUR BROTHERS COMPANY,
By ARTHUR F. MacARTHUR,
President.

810 Fisher Bldg., Chicago, Ill.

Form 19.

1. These articles of agreement entered into this twenty-third day of September, nineteen hundred ten, between Colonel C. McD. Townsend, Corps of Engineers, United States Army, hereinafter designated as the contracting officer, representing the United States of America, of the first part, and MacArthur Brothers Company, of Chicago, in the county of Cook, State of Illinois, hereinafter designated as the contractor, of the second part, Witnesseth, that the said parties do hereby covenant and agree, to and with each other, as follows:

2. In conformity with the advertisement and specifications hereunto attached, which form a part of this contract, the said contractor shall furnish all machinery and appliances, do the specified work and furnish the specified material at the rates given in proposal form hereto attached.

3. All materials furnished and work done under this con-
48 tract shall, before being accepted, be subject to a rigid inspection by an inspector appointed on the part of the United States, and such as do not conform to the specifications of this contract shall be rejected. The decision of the contracting officer as to quality and quantity shall be final.

4. The contractor shall commence, prosecute, and complete the work herein contracted for as set forth in paragraph 15 of the attached specifications.

5. If the contractor shall delay or fail to commence with the delivery of the material or the performance of the work as specified herein, or shall in the judgment of the contracting officer fail to prosecute faithfully and diligently the work in accordance with the specifications and requirements of this contract, then, in either case, the contracting officer shall have power, with the sanction of the Chief of Engineers, to annul this contract by giving notice in writing to that effect to the contractor, and upon the giving of such notice all payments to the contractor under this contract shall cease, and all money or reserved percentage due or to become due thereunder shall be retained by the United States until the final completion and acceptance of the work herein stipulated to be done; and the United States shall have the right to recover from the contractor whatever sums may be expended by the United States in completing the said contract in excess of the price herein stipulated to be paid the contractor for completing the same, and also all costs of inspection and superintendence, including all necessary traveling expenses connected therewith, incurred by the said United States in excess of those payable by the said United States during the period herein allowed for the completion of the contract by the contractor; and the contracting officer may deduct all the above-mentioned sums out of or from the money or reserved percentage retained as aforesaid; and upon the giving of the said notice the contracting officer shall be authorized to proceed to secure the performance of the work or delivery of the materials, by contract or otherwise, in accordance with law.

49 6. If the contractor shall fail to prosecute the work covered by this contract so as to complete the same within the time agreed upon, the contracting officer may, with the prior sanction of the Chief of Engineers, in lieu of annulling the conract under the preceding paragraph, waive the time limit and permit the contractor to finish the work within a reasonable period, to be determined by the contracting officer. Should the original time limit be thus waived, all expenses for inspection and superintendence, including all necessary traveling expenses connected therewith, and all other actual losses and damages to the United States due to the delay beyond the time originally set for completion, shall be determined by the contracting officer and deducted from any payments due or to become due the contractor: Provided, however, That no charge for inspection and superintendence shall be made for such period after the date of expiration of this contract, as in the judgment of the contracting officer, approved by the Chief of Engineers, shall equal the time which shall have been lost through any cause for which the United States is responsible, either in the beginning or prosecution of the work, or in the performance of extra work ordered by the contracting officer, or on account of unusual freshets, ice, rainfall, or other abnormal force or violence of the elements, or by strikes, epidemics, local or State quarantine restrictions, or other unforeseeable cause of delay arising through no fault of the contractor, and

which actually prevented such contractor from commencing or completing the work or delivering the material within the period required by the contract. The findings of the contracting officer, approved by the Chief of Engineers, shall be accepted by the parties hereto as final. But such waiver of the time and remission of charges shall in no manner affect the rights or obligations of the parties under this contract.

7. If, at any time during the prosecution of the work, it be found advantageous or necessary to make any change or modification in the project, and this change or modification should involve such change in the specifications as to character and quantity, whether of labor or material, as would either increase or diminish the cost of the work, then such change or modification must be agreed upon in writing by the contracting parties, the agreement setting forth fully the reasons for such change, and giving clearly the quantities and prices of both material and labor thus substituted for those named in the original contract, and before taking effect must be approved by the Secretary of War: Provided, That no payments shall be made unless such supplemental or modified agreement was signed and approved before the obligation arising from such modification was incurred.

8. No claim whatever shall at any time be made upon the United States by the contractor for or on account of any extra work or material performed or furnished, or alleged to have been performed or furnished under or by virtue of this contract, and not expressly bargained for and specifically included therein, unless such extra work or materials shall have been expressly required in writing by the contracting officer, the prices and quantities thereof having been first agreed upon by the contracting parties and approved by the Chief of Engineers.

9. The contractor shall be responsible for and pay all liabilities incurred in the prosecution of the work for labor and material.

10. Until final inspection and acceptance of, and payment for, all of the material and work herein provided for, no prior inspection, payment, or act is to be construed as a waiver of the right of the contracting officer to reject any defective work or material or to require the fulfillment of any of the terms of the contract.

11. The contractor shall hold and save the United States harmless from and against all and every demand, or demands, of any nature or kind for, or on account of, the use of any patented invention, article, or process included in the materials hereby agreed to be furnished and work to be done under this contract.

12. Payments shall be made to the contractor as prescribed in paragraph 17 of the specifications hereto attached and forming part of this agreement.

13. Neither this contract nor any interest therein shall be transferred to any other party or parties, and in case of such
51 transfer the United States may refuse to carry out this contract either with the transferrer or the transferee, but all rights of action for any breach of this contract by the said contractor are reserved to the United States.

14. No Member of or Delegate to Congress, nor any person belonging to, or employed in, the military service of the United States, is or shall be admitted to any share or part of this contract, or to any benefit which may arise herefrom.

But this stipulation, so far as it relates to Members of, or Delegates to, Congress, is not to be construed to extend to this contract.

15. The term "contracting officer," wherever used in this contract, shall include the duly appointed successor of such officer.

16. In the prosecution of the work herein specified, the employment of persons undergoing sentences of imprisonment at hard labor which have been imposed by courts of the several States, Territories, or municipalities having criminal jurisdiction, is prohibited.

17. No mechanic or laborer employed on the work herein specified will be permitted or required by the contractor to work more than eight hours in any one calendar day except in case of extraordinary emergency.

18. This contract shall be subject to approval of the Chief of Engineers, U. S. A.

In witness whereof the parties aforesaid have hereunto placed their signatures the date first hereinbefore written.

C. McD. TOWNSEND,
Colonel, Corps of Engineers, U. S. A.
MACARTHUR BROTHERS COMPANY,
By ARTHUR F. MACARTHUR,
President.
S. M. BALDWIN,
Asst. Secy.

Witnesses:
B. E. A. LAITMER.

(Executed in triplicate.)

Approved: October 5, 1910.

W. H. BIXBY,
Chief of Engineers, U. S. Army.

52 III. *Defendants' Demurrer to Amended Petition.*

(Filed December 30, 1918.)

Now come the defendants, by their Attorney General, and demur to the petition in the above-entitled cause on the ground that the

same does not state a cause of action, and on the further ground that the court is without jurisdiction to entertain the same.

HUSTON THOMPSON,
Assistant Attorney General.

GEORGE T. STORMONT,
Attorney.

53 IV. *Argument and Submission of Demurrer to Amended Petition.*

This case was argued in favor of the demurrer by George T. Stormont, and in opposition thereto by George A. King, and submitted March 31, 1919.

54 V. *Order Sustaining Demurrer.*

(Filed April 14, 1919.)

No. 33972.

MACARTHUR BROTHERS COMPANY

v.

THE UNITED STATES.

This case was submitted upon the defendants' demurrer to the plaintiff's petition and was argued by counsel. On consideration whereof the court is of opinion that the demurrer is well taken. It is therefore ordered by the court that the defendants' demurrer to the plaintiff's petition be and the same is sustained and plaintiff is given forty (40) days within which to amend its petition as it may be advised.

55 VI. *Motion for Extension of Time Within Which to File Second Amended Petition.*

(Filed May 15, 1919.)

No. 33972.

In the Court of Claims.

MACARTHUR BROTHERS COMPANY

v.

THE UNITED STATES.

Now comes the claimant in this cause by its attorneys of record and, representing that on account of the necessity of obtaining certain information which has not yet come to hand, it has been

impossible to comply with the order of this court to make the requisite amendment to this petition within forty (40) days from the order of the court April 14, 1919, moves the court for an extension of time for an additional thirty (30) days.

KING AND KING,
Attorneys for Claimant.

Allowed May 15, 1919.

56 In the Court of Claims.

No. 33972.

MACARTHUR BROTHERS COMPANY

v.

THE UNITED STATES.

VII. *Second Amended Petition.*

Filed June 19, 1919.

To the Honorable the Court of Claims:

The claimant, MacArthur Brothers Company, respectfully represents:

The claimant is a corporation organized and existing under the laws of the State of New Jersey.

The claimant on the 23d day of September, 1910, entered into a contract with the United States, duly represented by Colonel C. McD. Townsend, Corps of Engineers, United States Army, for constructing the west end of the new canal at Sault Sainte Marie, Michigan, which contract was duly approved by the Chief of Engineers, U. S. A., a copy of which contr-ct, together with the advertisement and specifications on which the same was based and which form a part thereof, is annexed to this petition and marked Exhibit "A" and made a part hereof.

The work to be done comprised the excavation of a portion of the new navigation channel, the construction of canal walls and piers, preparing a new headrace and forebay with controlling works, ice passages and weir, and the removal of existing and construction of new dykes.

57 The specifications covering the construction of the navigation channel provided that a portion of same should be taken out in the wet by dredges, and the remainder excavated in the dry. For the purpose of permitting this work to be done in the dry, it was necessary to construct certain cofferdams, one of which, known as the West Cofferdam, was to be built as a contract item, and connected the rock spoil bank (extending along the north side of the work) with the old North West Pier.

Said old North West Pier was constructed by another contractor

for the United States partly before and partly after the date of the claimant entering into the contract upon which this suit is founded.

The specifications which formed a part of said prior contract of the said preceding contractor were dated February 4, 1908, and were published and accessible to all persons desirous of examining the same; and the bids were advertised to be opened March 5, 1908. The contract for the performance of said work was dated March 23, 1908.

The work provided for by said specifications and contract of 1908 consisted among other things in excavating and removing material from an area of about 3,700 feet long; and in building, placing and filling 1,400 linear feet of timber crib walls and in building 3,700 feet of concrete walls.

The construction of said timber crib walls was provided for by the following provisions of the specifications forming a part of the said contract of 1908 as follows, to wit:

"Timber Revetment Walls.

"33. Character of the Work.—This part of the work comprises the building, placing and filling of timber revetment walls, sub-
58 structure and superstructure, the cribs for substructure being in lengths of 69, 100 and 116 feet. These walls are located in that part of the work done in the wet. All cribs except the end crib are of a uniform width of 16 feet.

"The timber and iron forming a part of the permanent work of the walls will be furnished by the United States and stored on or immediately adjacent to canal lands; the iron in a Government warehouse, and the timber sorted in piles as to lengths.

"34. Preparation of Foundation.—Where sound rock is found at an elevation above 91 canal datum, all earth, loose and unsound rock, and other material, shall be removed from the proposed wall site and for one foot back of the same, so that the foundation shall be sound rock as nearly a plane surface as the character of the rock will permit, all to the satisfaction of the Engineer. For this excavation within the limits specified payment will be made for material actually excavated according to the class planes within which it may lie.

"For the cribs to be placed in the area within the present canal and for cribs to be built where suitable rock foundation is not found above elevation 91 canal datum, the foundation shall be prepared as follows: The inequalities in the rock surface shall be filled with coarse gravel and cobble stones, or other equally suitable material, approved by the Engineer, the crib founded upon the foundation bed so prepared and then leveled up before adding the superstructure. For gravel filling so required the contractor will be paid at the contract rate for crib filling.

"35. Framing.—The forms of cribs, manner of framing and bolting the position of ties and tie rods, and all other details, shall be as

shown in the contract drawings and such others in minor modifications of the same as may be furnished the contractor from time to time. The workmanship of framing shall be first-class. The diameter of holes for drift holes shall be one-eighth inch less than diameter of bolts, and holes shall be bored the entire distance bolts are to be driven.

59 "After the preparation of the rock foundation, as specified above, accurate soundings shall be taken, and the bottom of the cribs shall be framed to approximately fit the bottom, without scribing, and the cribs leveled up according to the method indicated in the contract drawings.

"After the cribs are sunk and filled as hereinafter specified, the top course of each shall be leveled so as to be in the required horizontal plane, after which a continuous superstructure shall be built over the entire length and the filling extended to the top. The fender pieces shall then be bolted in place.

"36. Placing and Filling Cribs.—In placing cribs, each one shall be held in its required position, and when filled with stone, no point in its face shall be more than three inches out of alignment, and the space between adjacent cribs shall not exceed six inches. Such temporary floors, platforms and partitions as may be needed for use in sinking the cribs shall be furnished and placed by the contractor, but these shall be so arranged as to permit free access to the face of the crib when in place. After the crib is sunk in its proper position, any vacancies between the crib face timbers and the underlying rock exceeding six inches in height or four feet in length, shall be filled with granolithic or concrete in cloth bags, placed by diver as directed by the Engineer. The amount of this work required will depend upon the care exercised in stripping the rock surface and in framing and placing the cribs, and for concrete so placed payment will be made at the contract rate for concrete, all other expense being considered a part of the cost of framing. The rock filling shall consist of hard broken sandstone taken from the excavation made in the dry, and must be so deposited in the cribs and superstructure as not to injure any part of the work; the largest pieces must not exceed three feet on a side, and only so much of small spawls shall be used as is required to fill the voids between larger stones."

The claimant by its proper officers and engineers examined the specifications containing these provisions and the drawings
60 therein referred to between the time the same were published and the time bids were received thereon; and was one of the bidders for the work, which work, however, was awarded to another contractor, by contract dated, as hereinbefore stated, March 23, 1908.

Subsequently thereto on the 30th day of July, 1910, the specifications were advertised by the United States upon which the claimant became the contractor by said contract dated September 23, 1910, hereinbefore referred to.

At the time said specifications of July 30, 1910, were advertised, as well as at the time the claimant made its bid thereon, on the

29th of August, 1910, and the time the contract was entered into by this claimant, September 23, 1910, the work of the prior contractor under the contract dated March 23, 1908, hereinbefore referred to, was in progress, and had not been completed, and was not completed until after the claimant herein had entered into its contract and had begun work thereunder.

The claimant made all reasonable inquiries and investigations upon the site of the contract between the date of advertisement, July 30, 1910, and the date of submitting its bid, August 29, 1910, by the President and Chief Engineer of the company personally inspecting the conditions. The work under the previous contract of March 23, 1908, was then in progress and uncompleted.

The claimant assumed and believed, as it had a right to do, that the specifications of February 4, 1908, and the contract of March 23, 1908, had been and were being duly and properly carried out by the contractor then performing the contract for that work. If they had been so carried out the claimant would have been able
61 to perform under his own contract in the dry such portions of the work as were required by the contract to be done in the dry.

It was the expectation of the claimant that by constructing the west cofferdam and sheathing the face of the old North West Pier he would then be able with a reasonable amount of pumping machinery to pump out the enclosure and remove the Class "B" excavation in the dry.

The claimant began work on the day after the date of its contract, to wit, on the 24th of September, 1910, and completed the west cofferdam on the 24th of December, 1910. In the meantime material was being secured for making the old North West Pier tight, and between October 21st and November 1st a quantity of sand was dumped in the angle, near the outer end. On October 28th the work of covering the face of the pier with 2-inch sheathing was started. This work was carried on by the aid of divers, up to and including December 16th, when the pier had been covered up to a point opposite the junction of the west cofferdam.

The claimant, however, began to encounter crevices under the foundation of the cribbing, and it was only then discovered that the specifications of the previous contract had not been carried out; that loose and unsound rock had not been taken from the proposed wall site; that the foundation was not composed of sound rock, or leveled off to as nearly a plane surface as the character of the rock would permit; that the inequalities in the rock were not properly filled with suitable material; that the vacancies between the crib-face timbers and the underlying rock exceeding 6 inches in height or 4 feet in length were not filled with granolithic or concrete in cloth bags; and that generally the cribs had not been constructed and connected in accordance with the specifications of said contract of March
62 23, 1908.

These facts could not by the exercise of any reasonable diligence on the part of the claimant have been discovered prior to its entering into the contract or prior to the time when they were

so discovered after the claimant had begun the work under its contract.

The claimant having completed the work of sheathing the face of the crib, and the diver having placed sand bags along the toe of the sheathing, and a 15-inch and 20-inch centrifugal pump having been installed, an attempt was made, starting December 25, 1910, to pump out the area enclosed by the cofferdam. After a continuous run of 25 hours and 25 minutes, the pumps were unable appreciably to lower the level of the water therein. Starting December 28, a further attempt to pump out was made, with the intention of running three days and three nights. This attempt likewise demonstrated that the leakage was so great that the pumps were unable to lower the water.

Extraordinary and expensive means therefore had to — resorted to for a continuance of the work. Five (5) additional pumps were installed, and two (2) stock-ramming machines were also installed in order to shut out the water.

A large amount of concrete had to be placed in the large leaks found in and around the cribs. A large number of employees had to be placed upon the work at great expense, and the time of doing the work was greatly delayed beyond what claimant would have had to take if the conditions had been as shown by the specifications of the previous contract and had the work been performed by the previous contractor according to said specifications.

These methods were continued throughout the entire sea-
63 son of 1912 and until July 3, 1913, the work being performed under the utmost difficulties and at greatly enhanced expense.

By paragraphs 22 to 26 of the specifications of the claimant's contract certain areas were to be excavated in the dry while certain other portions of the work were to be dredged or otherwise taken out by methods applicable to wet excavation.

By paragraph 53 of the specifications unit prices are required to be named in the proposals for Classes "A" and "B," respectively, Class "A" being "dredging navigation canal" and being a portion of the work referred to in paragraphs 23 and 25 of the specifications as work to be in the wet or to be done by dredging, and for which the claimant's bid and contract were at the rate of $2.55 per cubic yard, bank measure. Class "B," as named in said paragraph 53 being "dry work, navigation canal," was the portion of the work required by paragraphs 23 and 25 of the specifications to be performed in the dry, and therein required to be classified in Class "B"; and for such work the bid of the claimant duly accepted and made a portion of the contract was at the rate of $1.14 per cubic yard, or about one-half the rate bid and accepted for material of Class "A," or dredging.

The methods usually adopted and practiced in engineering for the removal of materials in the wet are by dredges, and the words "wet work" or "work in the wet" as used in Par. 23 of the specifications are used as synonymous with the term "dredging." The removal of materials "in the dry," in pars. 24 and 53, means in engineering removal by means of a steam shovel or similar appliance which requires the removal of water to an extent which will

permit the laying of tracks and the operation of cars and
64 locomotives or other similar means of transporting the materials on the canal bottom.

The description of the work, Class "B," as dry work in the specifications was, by reason of the conditions existing at the site of the work as hereinbefore stated, a misrepresentation of the character of the work to be done, and induced on the part of the claimant a lower bid than would have been made if the conditions had been properly described in the specifications. Owing to the leakage coming through the old North West pier, it was not practicable for Class "B" excavation to be made in the dry as by said specifications it was represented that it could be.

When it became clearly apparent that it was impossible to make the floor of the area dry and to make the excavation in the dry as it was represented by the specifications of the claimant's contract that it was to be done, owing to the excessive leakage of water through the faulty construction of the old North West Pier by another contractor, as aforesaid, the claimant asked leave of the engineer in charge of said work on the part of the United States to take out the material by dredges in the wet, the method properly applicable to excavation of this character which could be done only under wet conditions. Said engineer in charge of the work of the United States would not allow the claimant to do the work in that manner, but required him to do the work by dry methods, to wit, by steam shovels operating on tracks, but always under conditions of so much water as to make the operation of such steam shovels and other methods applicable to dry excavation more expensive than if the work was, or could be, actually done in the dry. Said additional expense was incurred by reason of the work having been done by the previous contractor in a different manner from what was pro-
65 vided in the specifications, resulting in the work under the claimant's contract not being capable of being done in the dry as by the specifications of said contract it had been represented and agreed that it could be. The work was finally completed and accepted by the United States November 13, 1914.

By reason of the differences found by this claimant from the conditions that would have existed if the work required by the specifications of the previous contract of 1908 had been carried out as thereby required, and the conditions found being different from what were represented in the specifications of the claimant's contract, in that it was not possible to perform in the dry the excavation named in paragraphs 23 and 25 of the specifications as required so to be performed in the dry, the claimant incurred a greatly increased expense in carrying out the work under his contract.

By reason of the conditions encountered being different from what they were represented by the specifications of the contract of 1908, of which specifications the claimant had knowledge at the time of entering into this contract, as well as by reason of the conditions being different from what was represented by the specifications of claimant's contract, in that the excavation required by its contract to be done in the dry could be done only in the wet and notwith-

standing was required to be so done in the wet by methods applicable to dry excavation, thus causing extraordinary and unusual expenditures not contemplated by either of the contracting parties at the time that the contract was entered into, the claimant
66 sustained the following damages:

1. The excavation of 274,520 cubic yards of material cost 91 cents a cubic yard more than it would have cost if the conditions had been as represented to, and accepted by, the claimant, making an increased expense of	$249,813.20
2. Amount of pumping done by the claimant over and above the estimated cost of pumping and over and above what the pumping would have cost under the normal conditions which the claimant had the right to expect	79,262.79
3. Expense incurred in endeavoring to stop leaks in cribs which would not have been there if the cribs had been constructed in accordance with the specifications of the contract of 1908	9,246.09
4. Stock-ramming, amount chargeable to work on the old North West Pier on account of the same being constructed in a manner different from and contrary to the specifications	27,730.59
Total	$366,052.67

No assignment or transfer of this claim, or of any part thereof or interest therein, has been made; and the claimant is justly entitled to the amount herein claimed from the United States, after allowing all just credits and offsets.

The claimant is a corporation as hereinbefore stated and has at all times borne true faith and allegiance to the Government of the United States and has never in any way aided, abetted, or given encouragement to rebellion against the said Government.
67 And the claimant prays judgment for three hundred and sixty-six thousand and fifty-two dollars and sixty-seven cents ($366,052.67).

KING & KING,
Attorneys of Record.

Washington, D. C.

STATE OF NEW YORK,
County of New York, ss:

Arthur F. MacArthur, being duly sworn, deposes and says: I am president of MacArthur Brothers Company, the claimant in this case. I have read the above second amended petition, and the matters therein stated are true to the best of my knowledge and belief.

ARTHUR F. MACARTHUR.

Subscribed and sworn to before me this 17th day of June, 1919.
[SEAL.] FREDERICK J. APPLE,
Notary Public.

68 VIII. *Defendant's Demurrer to Second Amended Petition.*

(Filed August 14, 1919.)

Now comes the defendant, by the Attorney General, and demurs to the second amended petition in the above entitled cause, on the ground that said second amended petition does not state a cause of action, and on the further ground that the court is without jurisdiction to entertain it.

FRANK DAVIS, JR.,
Assistant Attorney General.

G. T. STORMONT,
Attorney.

69 IX. *Opinion of the Court.*

Court of Claims of the United States.

No. 33972.

MACARTHUR BROTHERS COMPANY

v.

THE UNITED STATES.

(Decided March 8, 1920.)

Opinion.

GRAHAM, *Judge*, delivered the opinion of the court.

This case comes on *an* demurrer to the plaintiff's second amended petition, demurrers to the original and first amended petitions having been sustained and plaintiff given leave to amend.

It is an action to recover damages for a breach of contract growing out of an alleged misrepresentation.

The plaintiff entered into a contract to erect a new headrace and forebay and to do certain excavating in connection with the construction of a new canal at Sault Ste. Marie, Michigan. The places where the dredging was to be done were under water. A part of this dredging was to be done in the dry, and in order to perform it the plaintiff was required by the contract to build a cofferdam around the area where the work was to be done for the purpose of excluding the water from the outside. After this cofferdam had been erected the water contained within it was to be pumped out and the area dredged in the dry. At the time the contract was executed the defendant was erecting near this area a pier known

as the "North West Pier," which should not be confounded with the new pier called the "North West Pier" mentioned in the specifications, the construction of which is provided for in this contract. It was nearing completion, but was not completed until some weeks after the execution of this contract. The work of erecting it was being done by another contractor. There was no mention in the contract of this pier or of its use for any purpose. The plaintiff waited until this pier was completed and then constructed its cofferdam, making use of this pier as a part of it, and attempted to make the pier water-tight by sheathing it and depositing materials around certain portions of it for the purpose of excluding the water from the area inclosed. The action of the plaintiff in taking possession of this pier and using it was entirely spontaneous and voluntary and apparently for its own convenience and profit. It was not in any way induced by the defendant.

70 More than two years prior to the execution of this contract the plaintiff had been a bidder for the erection of this pier and thereby gained knowledge of the specifications for its erection. These specifications clearly indicated that this pier, when erected, would be used as a pier. It was constructed for use as a pier and not as a cofferdam. It was not designed or intended to be water-tight. The specifications, among other things, did not require openings smaller than 4 feet long and 6 inches wide at the base of the pier to be closed. The plaintiff's bid on it was not accepted and the contract was let to another contractor.

While the plaintiff's petition avers such conclusions as that it made "reasonable inquiries and investigations on the site," and that its officers "personally inspected the conditions," no facts are stated as to how or of whom these inquiries and investigations were made or what was done by its officers toward inspecting the conditions of the pier. Only these insufficient and inadequate conclusions are averred to indicate diligence in the matter.

Having completed its cofferdam by using this pier the plaintiff attempted to pump out the water therein as required by the contract, and at once discovered that its efforts to render the pier water-tight had not been successful and that the water poured into the cofferdam as fast as it could be pumped out. It thereupon became necessary to do additional work on the pier as a part of the cofferdam, to employ additional labor and pumping facilities, all of which occasioned delay and expense, to recover damages for which the plaintiff has brought this suit.

The contract contained the following provisions:

"It is understood and agreed that the quantities given in these specifications are approximately only, and that no claim shall be made against the United States on account of any excess or deficiency, absolute or relative, in the same. No allowance will be made for the failure of a bidder or of the contractor to estimate correctly the difficulties attending the execution of the work.

"It is expected that each bidder will, prior to submitting his bid, visit the site of the work, examine the local conditions, inform himself as to the accessibility of the work, ascertain the character of the

material to be excavated, consult the plans on file in the U. S. Engineer Office at Sault Ste. Marie, Mich., and obtain such available information as will assist him to make an intelligent bid, and the failure of a bidder to make such examination may be held to be sufficient reason for rejecting his bid.

"The contractor must construct and maintain all the necessary cofferdams, furnish suitable and adequate pumping plant, and do all the pumping required to unwater all areas where work is to be done in the dry, and no special payment will be made therefor, the above work and expense being considered as incident to the general work covered by the contract prices of other items * * *.

"The United States assumes no responsibility whatsoever for loss of life, property, or contractors' time due to the failure of any part of the cofferdams, dikes, or pumping plant."

The plaintiff's proposal upon which this contract was awarded to it contains the following:

"We make this proposal with a full knowledge of the kind, quantity, and quality of the plant, work, and materials required * * *."

71 The plaintiff's theory of recovery, as stated in the petition, is that it "assumed and believed, as it had a right to do, that the specifications of February 4, 1908, and the contract of March 23, 1908, had been and were being duly and properly carried out by the contractor then performing the contract for that work. If they had been so carried out the claimant would have been able to perform under his own contract in the dry such portions of the work as were required by the contract to be done in the dry."

Again—

"By reason of the differences found by this claimant from the conditions that would have existed if the work required by the specifications of the previous contract of 1908 had been carried out as thereby required, and the conditions found being different from what were represented in the specifications of the claimant's contract, in that it was not possible to perform in the dry the excavation named in paragraphs 23 and 25 of the specifications as required to be performed in the dry, the claimant incurred a greatly increased expense in carrying out the work under his contract."

"By reason of the conditions encountered being different from what they were represented by the specifications of the contract of 1908, of which specifications the claimant had knowledge at the time of entering into this contract, as well as by reason of the conditions being different from what was represented by the specifications of claimant's contract, in that the excavation required by its contract to be done in the dry could be done only in the wet and notwithstanding was required to be so done in the wet by methods applicable to dry excavation, thus causing extraordinary and unusual expenditures not contemplated by either of the contracting parties at the time that the contract was entered into."

The plaintiff alleges two grounds of misrepresentation, but does not seem to rely upon either of them standing alone, but upon their

conjunction as a whole. It is not claimed that standing alone either presents a ground of recovery, but that together they do.

There are no facts presented in the petition which show a misrepresentation in fact or in law. What occurred relative to this pier was that the Government advertised for bids on it and, as usual, had its specifications prepared for the inspection of bidders. The plaintiff bid on the contract, but its bid was not accepted. The bid of a competitor was accepted. There could arise no misrepresentation in law from the relation of the parties. There was no obligation growing out of the relation of the parties as to the erection of this pier requiring the defendant to erect it according to the specifications.

The plaintiff's connection with this matter was in making a proposal in response to the defendant's request for bids for the proposed work according to certain specifications. There was no statement by the defendant that it would erect this pier as proposed. It did not bind itself to erect it as proposed, or to even erect it at all. It could have rejected the bids and not erected it.

It is the conclusion of the court that the demurrer to the plaintiff's second amended petition should be sustained and the petition dismissed, and it is so ordered.

72 X. *Order for Judgment.*

(Filed March 8, 1920.)

In this case upon due consideration, the court orders that defendant's demurrer to plaintiff's second amended petition be sustained and that the petition herein be and it hereby is dismissed with an opinion by Judge Graham.

73 XI. *Application for and Order Allowing Appeal.*

(Filed June 1, 1920.)

In the Court of Claims.

No. 33972.

MacArthur Brothers Company

v.

The United States.

From the judgment dismissing the petition in the above-entitled cause, dated March 8, 1920, the claimant, MacArthur Brothers Company, hereby makes application for and gives notice of an appeal to the Supreme Court of the United States.

KING AND KING,
Attorneys for Claimant.

Ordered: That the appeal be allowed as prayed for.

By THE COURT.

June 1, 1920.

74 XII. *Stipulation.*

(Filed June 1, 1920.)

In the Court of Claims.

No. 33972.

MACARTHUR BROTHERS COMPANY

v.

THE UNITED STATES.

Stipulation.

It is hereby stipulated and agreed that the record on appeal shall consist of the following papers:

1. Note of filing of original petition, June 21, 1918.

2. First amended petition filed October 30, 1918, in full, with the Exhibits thereto annexed, consisting of advertisement, specifications and contract, together with the drawing hereto annexed, Sheet No. 1, Drawing No. 301, General Map of Location, constituting a part of the contract and referred to in Par. 20 of the specifications.

3. Demurrer to said first amended petition filed December 30, 1918.

4. Order sustaining said demurrer April 14, 1919.

5. Second amended petition filed June 19, 1919.

75 6. Demurrer to said second amended petition filed August 14, 1919.

7. Opinion of court delivered March 8, 1920, sustaining said demurrer and ordering dismissal of petition.

8. Final judgment of March 8, 1920, dismissing petition.

KING AND KING,
Attorneys for Claimant.
FRANK DAVIS, JR.,
Assistant Attorney General.

(Here follows map marked page 75a.)

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76 In the Court of Claims.

No. 33972.

MacArthur Brothers Company

v.

The United States.

I, F. C. Kleinschmidt, Chief Clerk of the Court of Claims, certify that the foregoing are true transcripts of the pleadings in the above-entitled cause, of the opinions of the court on demurrers, of the final judgment of the court, and application of the claimant for and allowance of the appeal to the Supreme Court of the United States, and of the stipulation as to record on appeal and of the papers therein referred to.

In testimony whereof I have hereunto set my hand and affixed the seal of the Court of Claims this 29 day of June, A. D. 1920.

[Seal of Court of Claims.]

F. C. KLEINSCHMIDT,
Asst. Clerk Court of Claims.

Endorsed on cover: File No. 27,787. Court of Claims. Term No. 430. MacArthur Brothers Company, appellant, vs. The United States. Filed June 29th, 1920. File No. 27,787.

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